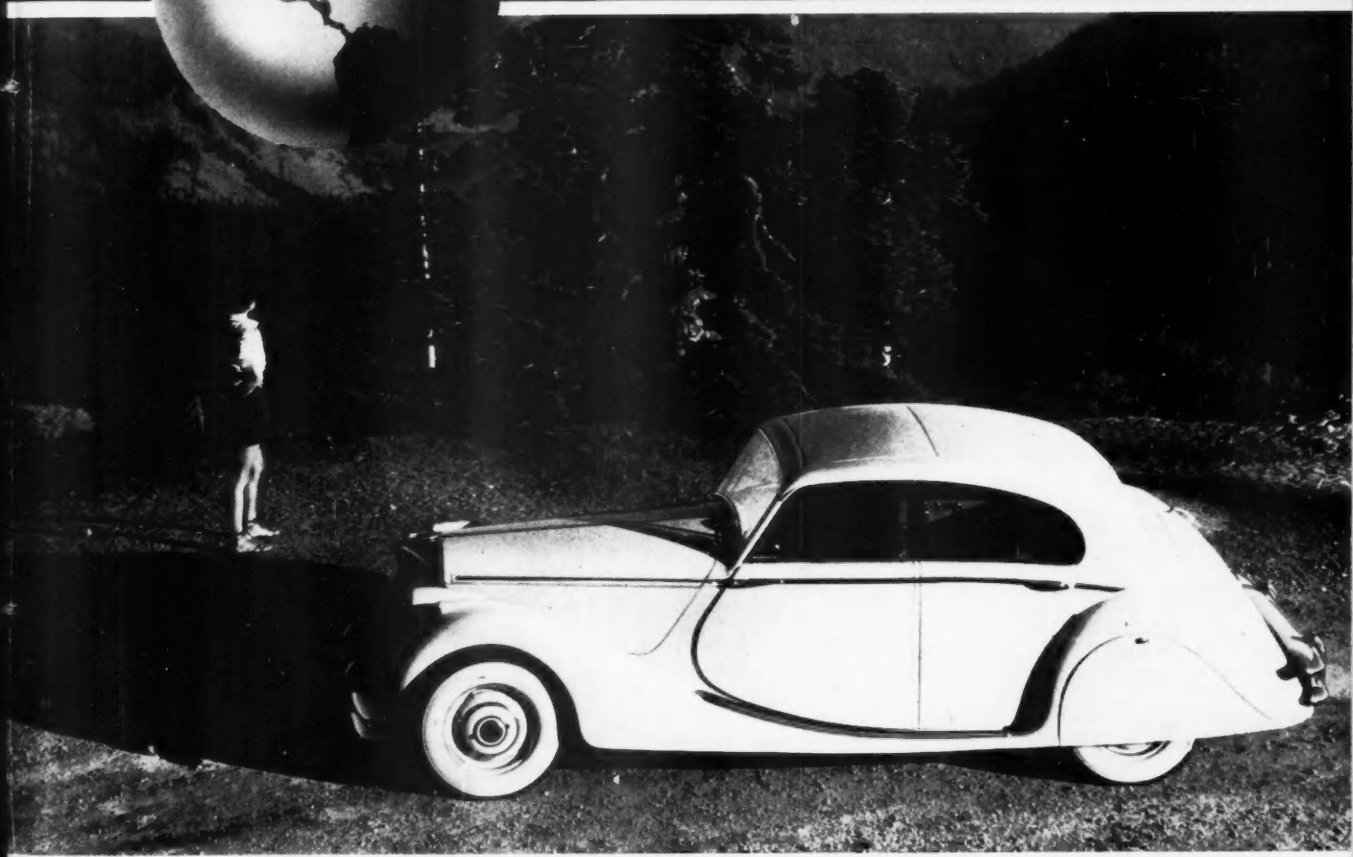


JANUARY 1950

# MOTOR trend



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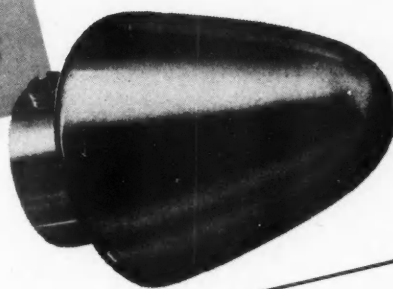




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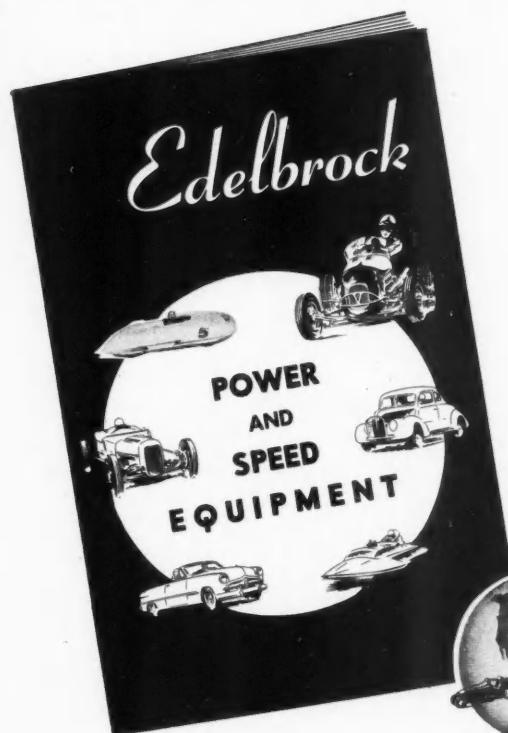
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JANUARY 1950

Published Monthly

VOL. 2 • NO. 1

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COVER: The scenic beauty of Mt. Lassen National Park serves as a suitable background for Mrs. Roger Barlow and her Jaguar Mark V Saloon. Photo by ROGER BARLOW

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## through your criticism

**I**N OUR first issue of MOTOR TREND (September 1949) we asked you for comments and criticism to improve our magazine. The response has been most gratifying.

As a result of your suggestions we have incorporated additional departments and are featuring the subjects which we believe the majority of you prefer. In line with these improvements we are adding three feature writers to our staff, names with which you have now become familiar.

Taking them alphabetically, the first staff writer is Griffith Borgeson, who started working on automobiles at the age of 10. He began correspondence with European car manufacturers at 14, and acquired his first Mercedes-Benz at 17. Since that time he has majored in mathematics in college and has been employed as an automotive and marine machinist.

Our second feature writer is unfamiliar to you in MOTOR TREND by this name for he has been using a pen name of Hank Ogden. However, as a staff writer he deserves listing under his real name, H. Wieand Bowman. Hank has had contact with auto racing since he was "old enough to jump the fence at Langhorne Speedway." His interest and knowledge of engines stems from owning and servicing various outboard racing engines, and experience with PT boat engines, and as the owner of a midget auto racer.

Third in the addition of staff writers, is George Finneran, who graduated from California with a degree in journalism and studied engineering at Antioch College. He has been interested in cars for the last fifteen years and has been a collector for about 10 years, now being the proud owner of a 1933 Packard, designed by LeBaron.



# MOTOR TRIALS

Sea Level to  
Sky Level with  
the 1950 Ford



PHOTOGRAPHS BY THOMAS J. MEDLEY

by Walter A. Woron

**P**ROBABLY ONE OF the most rigorous courses that could be taken to road test a new car in the Southern California area was the one followed recently by your editor in a 1950 Ford V-8 and which, literally, travels from "sea level to sky level."

Starting at the Ford Motor Company Plant in Long Beach, the course has very few open stretches of highway; requires frequent stops and starts; is full of all types of traffic, including trucks, busses and trains; goes through heavy city traffic; and then begins an ascent of some 5000 feet through mountainous roads full of switch-backs, 'S' turns and narrow, sharp corners, to the Mt. Wilson Observatory, 5704 feet above sea level.

The Ford that we picked up at the factory had only 17 miles on the speedometer (all put on it inside the factory gates). The engine had had its initial tune-up, the oil and water supply were checked, and the fuel tank was filled. Unlike most cars driven away or delivered from the factory, this Custom Deluxe Fordor Sedan was loaded with extras (\$500 worth), for after the road test, it was to be delivered to the Parts Sales Manager for his use.

We left the factory at 10 AM, and in a short while, began to take note of the improvements made in this new model. In all, as stated in Ford publicity releases, there are 50 improvements in the '50 Ford. Many of these, however, are styling features intended to present a smoother design and include such changes as the new Ford crest, new parking lights, new colors, new hood ornament and a new ornamental deck lid handle.

A noticeable improvement on opening and closing the car doors is the use of the push-button door handle in conjunction with rotary locks and improved door seals. The door now opens easier and closes with a firm "thump."

The Ford Motor Company has provided a quieter engine in the '50 model. This has been accomplished by replacing the former aluminum camshaft timing gear with one made of a laminated composition material, and regrounding the camshaft lobes to provide a longer opening and closing



**CORNERING** ability of the '50 Ford has been improved

ramp. (This latter change eliminates tappet noises; however, it does not affect valve timing.) Another noise contributor has been reduced by the use of a three-bladed fan and a reduction of fan speed to  $\frac{9}{10}$  of engine speed by the use of narrow fan belts and a rearrangement of the drive so that each belt drives three pulleys instead of four (see photograph).

Changes in the engine which should result in increased oil economy are: new aluminum pistons which have a steel strut cast into the aluminum piston to control expansion and contraction; addition of an oil squirt hole in the connecting rods; and a rubber seal ring on the intake valve stem guide to prevent leakage at this point. The oil consumption was checked at both ends of the trip.

Overdrive is a desirable feature of the Ford and is factory-installed optional equipment. The standard rear axle ratio is 3.73:1, while a 4.10:1 ratio is used with the overdrive transmission. As a comparison, when the engine is turning over 2306 rpm, the car without overdrive will be doing 50 mph, while the car with overdrive will be doing



65 mph. However, the biggest advantage to overdrive is in the fact that the engine of the car with overdrive turns a much lower rpm to achieve the same speed of the car without overdrive. This results in both increased fuel economy and increased engine life.

The feel at the Ford steering wheel is very firm and you have positive control at all times. The light touch of some previous models seems to have been altered to give this quicker control, which will be appreciated by men drivers, particularly.

The Ford corners quite well, due in part to the weight distribution and the improved front end suspension, which features a torsional stabilizer that is fastened (rigidly and through bonded rubber) to each lower 'A' frame. The stabilizer is located in front of the front cross-member, but is not fastened to it.

The brakes performed exceptionally well, with no brake fade being evident after continued usage on the many turns and grades of mountain travel.

Since the car was a new one, was driven through heavy traffic, over mountainous roads and was unable to take advantage of overdrive, the fuel consumption average was not as high as could be expected under normal conditions. However, having driven a total of 125 miles and having obtained an average of 15.2 miles per gallon, we were satisfied. Under normal conditions, after the car is broken in,

an average of 19-20 mpg could be expected.

With a new car, we were hesitant about trying acceleration or top speed tests; however, in a later issue of MOTOR TREND, we will publish this information.

The '50 Ford is a good buy in its price range, being suitable for most road conditions and for all types of drivers. For those who wish extras on their cars, the Ford Motor Company has quite an impressive array (as shown on the test car). As with most cars, overdrive, low-pressure tires, radio and heater are included in these extras.

#### DETAIL SPECIFICATIONS ENGINE

Number of Cylinders.....	8
Bore.....	3 $\frac{1}{4}$ inches
Stroke.....	3 $\frac{1}{4}$ inches
Displacement.....	239.4 cubic inches
Maximum Bhp.....	100 @ 3600 rpm
Compression Ratio.....	6.8:1

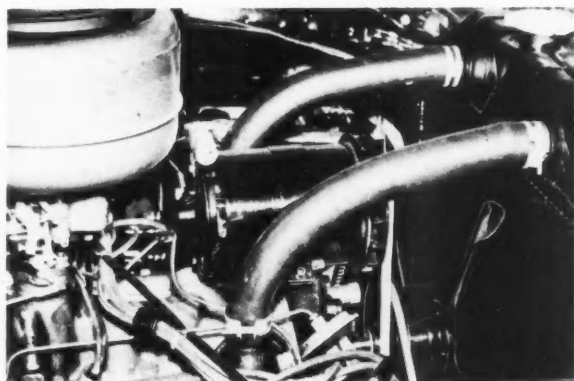
#### REAR AXLE

Hotchkiss drive, semi-floating with hypoid gears.

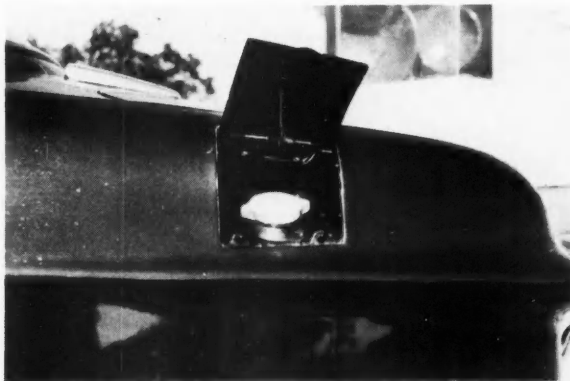
Rear axle ratio (conventional transmission).....	3.73:1
(with overdrive).....	4.10:1

#### DIMENSIONS

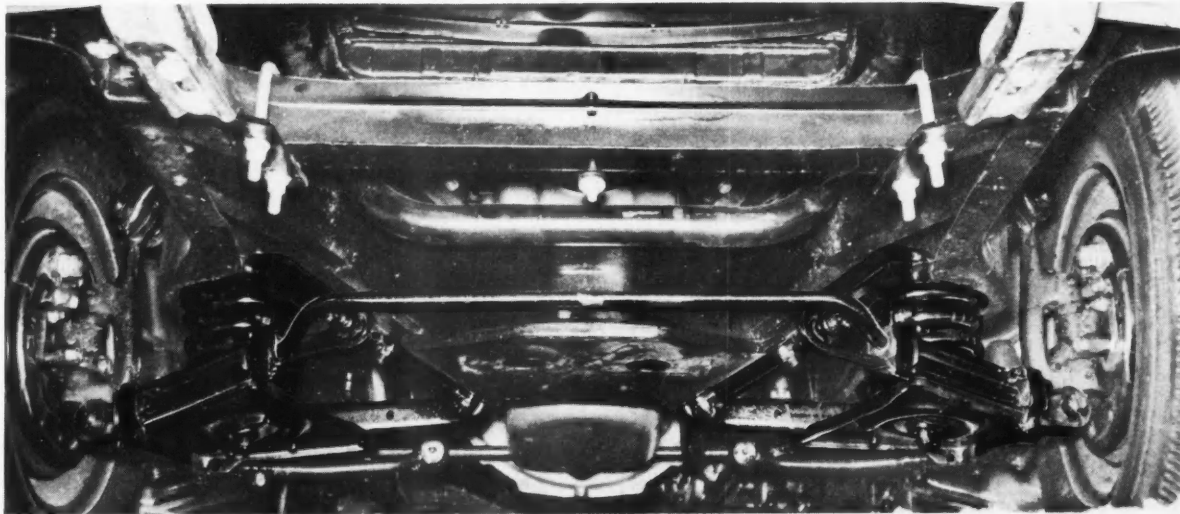
Tread, front and rear.....	56 inches
Wheelbase.....	114 inches
Overall width.....	71.7 inches
Overall height.....	62.8 inches
Overall length.....	196.8 inches



NOISE has been reduced by the use of a new fan belt system



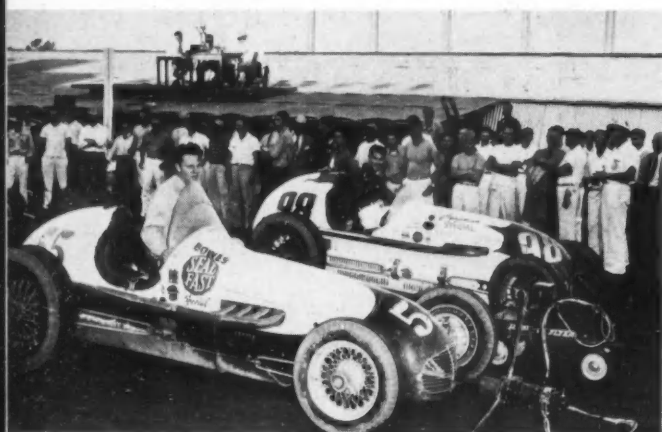
FUEL tank filler neck is now enclosed by a door in the fender



IMPROVED front end suspension features a torsional stabilizer fastened to each lower 'A' frame



DANA PHOTO BY RICK



DANA PHOTO BY RICK

**YOUNGEST DRIVERS** at Sacramento were also the fastest

**O**NE OF the biggest triumphs of this year's racing belongs to Northern California's own Freddie Agabashian, who copped top money and a whopping trophy in the West Coast's most important track event in years—the AAA National Championship race at Sacramento on October 30th. Stealing—or at least muting—the thunder of Indianapolis' best, Freddie did the hundred laps in one hour 11:1.05, an average of 84.5 mph on a very soggy track.

Making the Californian's win appropriate, almost to the point of poetic justice, was the fact that this was the first AAA National Championship Big Car race to be held on the long-neglected West Coast since 1931. The AAA, in addition to its well-known function as a sort of road-insurance club, is also the governing body for championship racing. It holds a dozen or so events a year, long restricted to the East and Midwest, in which points adding up to the national championship can be won. The resounding financial success of the Sacramento race—and the stands were packed—probably means the be-

Eight

# BIG CAR R

**AT SACRAMENTO** *by Griffith Borgeson*



GRIFFITH BORGESON

**BIG CARS** all lined up for start of the Sacramento 100-miler

ginning of a brand new circuit which will bring the finest drivers and machines to the West each year, where they will be more than welcome.

There were more big names in Sacramento than a California race crowd had seen since the early 'teens and the road races at Santa Monica. There was Bill Holland, the Pennsylvania roller-rink entrepreneur who took first at the Indianapolis 500 this year, and Johnny Parsons, the wild showman of midget fame, who took second; Glendale's Rex Mays was there, and Albany's Agabashian, and the winners of 3rd and 4th places in the 500, George Connor and Myron Fohr.

All the cars were Meyer-Drake Offys conforming to the AAA eligibility requirements: displacement limited to 274.59 cu. in. (4500 cc) or a blown 183.06 cu. in. (3000 cc); no weight restriction, that being self-adjusting; booster starter, reverse gear, and clutch must be part of the car's equipment; minimum wheelbase 96 in.; towing or pushing at the start is taboo; and a magnaflux certificate

(Continued on page twenty-two)

Motor Trend



PAUL MADIGAN

# R RACES

AT DEL MAR *by Nick Alexander*

**A**LTHOUGH IT IS said that things always come in threes, California big car race fans will have to be content with only two AAA championship dirt track races—at least this year. Even one race, however, would have been more than welcome, for this type of racing has not been seen in California for 15 years.

The first big car race since 1934 was held at the Sacramento Fairgrounds on October 30, with the second championship race taking place the following Sunday at the famed Del Mar Race Track. Practically the same cars and drivers were present at both races.

The majority of cars present were powered by 270 cu. in. Offenhauser (Meyer-Drake) four-cylinder engines. There were, however, some cars using other power plants. Among these were the following: a blown 107 cu. in. Offy (the Belanger Special) set in a special Kurtis-Kraft chassis, with torsional suspension; a large bore V-8; using high compression heads and a three carburetor set-up; and a Chevy 6, using a Wayne head and six carburetor manifold. Also entered on the program was an Alfa-Romeo which, unfortunately, did not show up.

The cars began qualifying, under a bright November sun, at 12:00 noon. The fastest time was turned by Jim Davies, in the Pat Clancy Special, at :37.57, or 95.58 mph. Davies, in this same car, established the world's record for a one mile dirt track at Springfield, Illinois, earlier this year, at :35.50, or 101.40 mph.

The Pat Clancy Special, also known as the "six wheeler," is the same car that appeared at Indianapolis with four wheels on the rear axle. On a track of that size, the added wheels were of benefit, but on a shorter track, Clancy has found that the engine does not have sufficient power.

At 3 PM, the 18 cars that qualified lined up two abreast, with Jimmy Davies on the pole and Rex Mays (270 Offy)

(Continued on page twenty-three)



PAUL MADIGAN

TROY RUTTMAN, car pouring smoke, is signalled off track



PAUL MADIGAN

SIX MEMBERS of the Bowes Team crowd around their car

Nine



# REVERSING A TREND

AMERICAN SPORTS CAR  
FOR EUROPEAN COMPETITION

**R**EVERSING A TREND of building individual sports cars for use only in this country, Sterling Edwards of Hollywood, California, has produced a custom-built car that will be used on road race courses throughout Europe this spring. As conditions stand now, the car will not be placed in production, since it is intended only for Edwards' personal use.

Although a Ford V-8-60 is used for the powerplant, the car was designed for competition in Formula B classification (2 litres—122 cu. in.). To make the car eligible for this class, Edwards intends to sleeve the cylinder and to destroy the crankshaft, thereby bringing the cubic inch displacement down to the maximum allowable.

The original drawings of the car were made by Edwards; then with the assistance of Norman Timbs of Van Nuys (cover car, October '49), he began to plan out the car. From the drawing board, an exact scale wooden model was built up from which the body lines were worked out. A small traveling overhead crane with a pointer was used to pick up the various stations from the model. These locations were then transposed onto a wooden mockup. Aluminum alloy sheets were then pounded out and accurately fitted to the mockup.

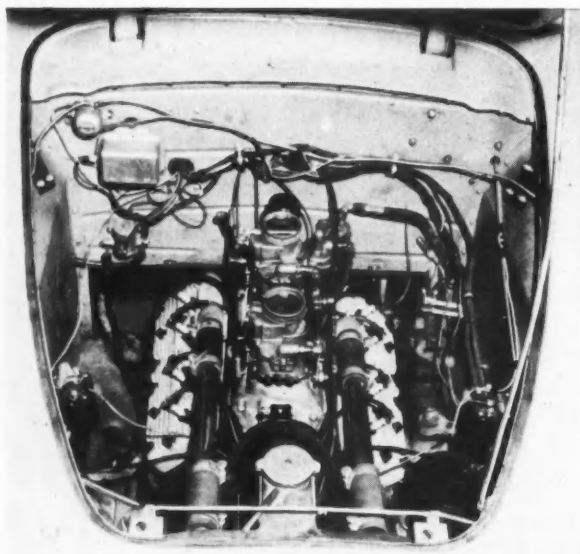
In the meanwhile, the running gear was assembled and comprehensively tested on a race track. After this testing period, the body was fitted to the chassis and the final assembly was made. Production of the chassis began in January 1948, while the body was started in June 1949. Four months later, the S-E Sports Car was standing complete in the Diedt & Lesovsky garage, an automotive engineering firm in Los Angeles.

Possibly the most interesting feature of the S-E Sports Car is the tubular frame, using independent suspension at all four wheels. The side members consist of chrome-moly

(Continued on page twenty-six)



INTERIOR by Dale Runyan includes maroon genuine leather



POWERPLANT of S-E Sports Car is Eddie Meyer Ford V-8-60



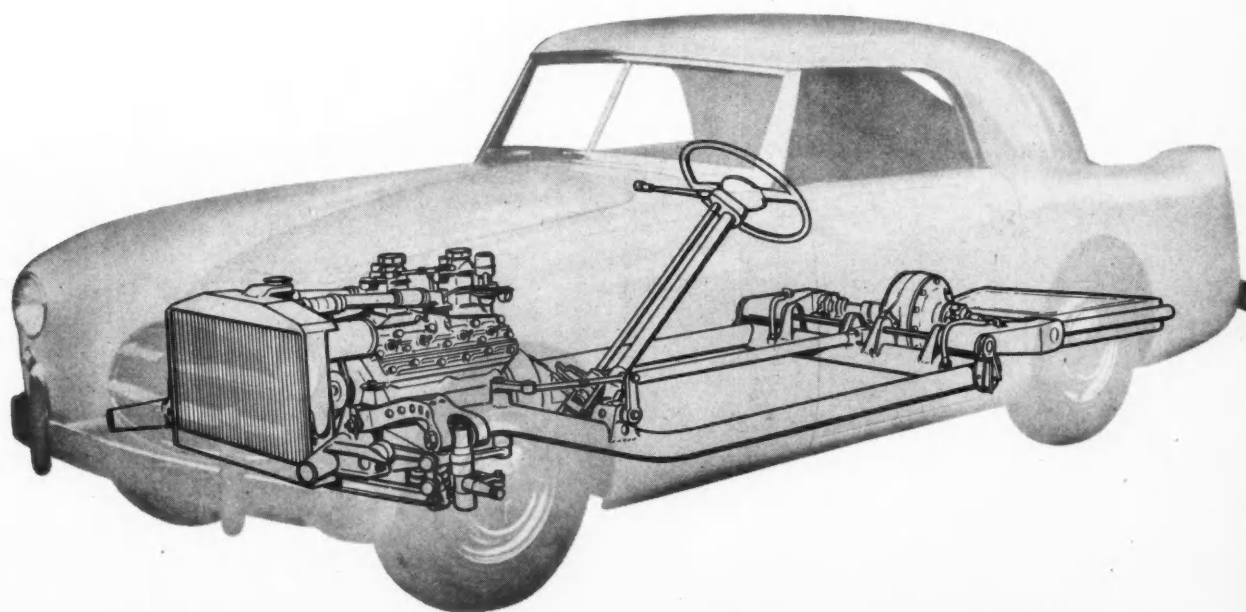
SIDE VIEW of Edwards' car shows the graceful lines to advantage





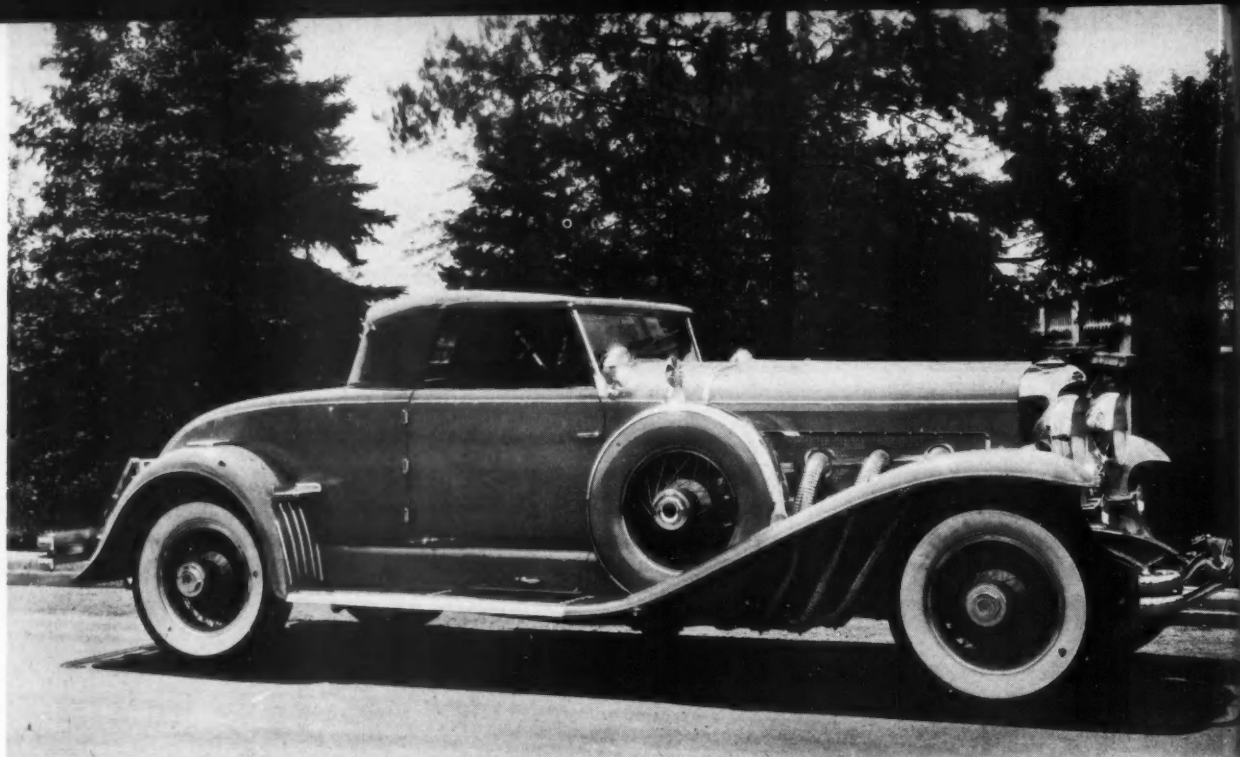
STERLING EDWARDS stands beside his sports car, resting his arm on the removable aluminum top

PHOTOGRAPHS BY THOMAS J. MEDLEY



CUTAWAY shows the powerplant installation, frame assembly and four-wheel independent suspension

ALBERT H. ISAACS



W. EVERETT MILLER

## THE DUESENBERG SERIES J

by George Finneran

**A** VERY well-known woman writer, famous for a novel on the life of a quixotic jazz trumpeter, recently brought forth a new novel in which the Duesenberg is rhapsodized for almost an entire page as the epitomy of German craftsmanship . . .

A garage owner, a well-informed man on Packard 12's, Cad 16's, Stutz and other uncommon cars, looks at a picture of a Series J Duesenberg, shakes his head and clucks, "Those Germans sure knew how to build an automobile . . ."

In a movie of the "Spy, Spy, Who's Got the Spy?" type, the Gestapo chases the British secret agent down the Autobahn, the spy driving a Mercedes (that fine old British car), while the Gestapo is driving another one of those German Duesenbergs . . .

This sort of nonsense has been going on long enough, so before the whole thing falls into the hands of an un-American committee, let's put Sonny Boy on our knee and indoctrinate the rascal with the true facts about the American luxury car of the highways, the Series J Duesenberg. Our bedtime story could go something like this:

"The Duesenberg Series J was the American answer to the age-old European question, 'When you slobs gonna produce a decent cah, huh?' Yes, yes, I know, you hogly leetle keed, the Duese A was a fine car too (I says to him), but I am speaking only of the Series J now, so shaddap!"

In 1928, Frederick Samuel Duesenberg (1876-1932) introduced the 265 horsepower Series J, which had actually been designed as early as 1926. "Chassis and engine only" were to be had f.o.b. Indianapolis for the modest sum of \$8,500, and a lush car for a lush year it was. What with the stock market playing fairy godmother to anyone with a few bucks under his garter, the J hit the

market at just the right moment. Europeans took a boat ride, rode around the block in a Duese demonstrator, struck themselves on the forehead and exclaimed, "Mon Dieu, il est un rod hot!" and placed an immediate order. And sales in general became so good that in 1933 the Duese catalogue was able to announce with pardonable pride, "MORE DUESENBERGS ARE SOLD THAN ANY OTHER AMERICAN CAR COSTING OVER \$9500!" Think of that!

A fantastic attention to detail was one of the biggest selling-points of the Duese (please remember that when you paid your 8500 clams—a little later, 9500—all you got was an engine, chassis, fenders, hood, dash, wheels, and miscellaneous items). For instance, the radiator, radiator cap, wire wheels and hub caps, head lights, parking lights, tail light, tie rod tube, bumpers, hood brackets, oil filter, generator drive shaft and generator straps, dashboard, dash moulding, running board strips, radiator tie rod, intake manifold, and all exposed nuts and bolts on the engine—all these were chromed. The inside of the block, transmission, and differential were painted with red enamel; the outside of the block and the exhaust manifold were "attractively finished in heat-resistant green enamel." Polished, heat-treated aluminum was used for the two camshaft covers, intake manifolds, water jacket covers, engine chain covers, etc. Plain old, everyday, unpolished, heat-treated aluminum was used for the dash, instrument board and brackets, differential and flywheel housing, tail light bracket, spare wheel brackets, oil pan, water pump, front and rear brake drum covers, hydraulic and emergency brake shoes, fuel pump housing, etc. This sort of thing led even the wealthiest Duese owner to steal out to the

# LUXURY ON WHEELS

seven-car garage on a quiet Sunday morning and spend a happy hour or two with a can of metal polish and some Simoniz wax for the "attractive green enamel." Go to your nearest Duesenberg right now and see what I mean.

I said a big selling-point was the exquisite attention to detail in the finishing of mechanical parts; equal in importance, however, would be the Duese's remarkable performance. Blurbs used in advertising the car were just plumb full of figgers:

"The Duesenberg . . . 265 horsepower . . . 116 miles per hour on the Indianapolis Speedway . . . has run 89 miles per hour in second gear . . . reaches 80 miles per hour in 22 seconds when accelerating in high from 10 miles per hour . . . from 5 to 25 miles per hour in 5 seconds . . . loafing at 80 . . ."

And when speaking of construction specifications, figgers were just as numerous: ". . . 265 hp at 4200 rpm . . . straight 8 . . . 3 $\frac{3}{4}$ -inch by 4 $\frac{3}{4}$ -inch stroke and bore . . .

4 valves per cylinder . . . 420 cubic inch displacement . . . 142 $\frac{1}{2}$  inches for passenger jobs, and 153 $\frac{1}{2}$  inches for seven passenger . . . 50 per cent stronger construction than considered necessary . . . 4500 pounds for four passenger phaeton . . . top of frame 20 inches from ground . . ." etc., and far into the night.

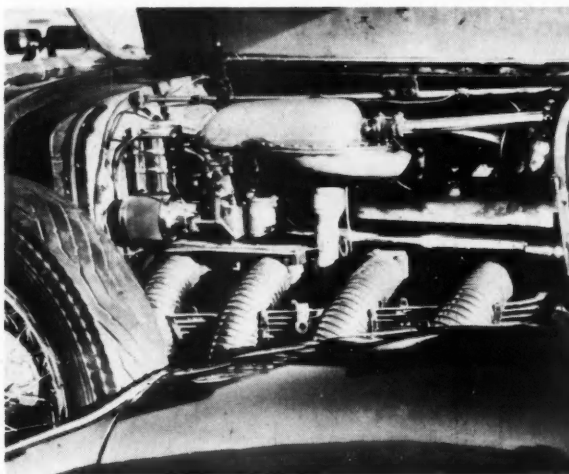
Before we go into any more technical detail, let's cover the body beautiful. The Duesenberg was a chassis-and-engine-only deal, as you know. All bodies were sub-contracted for by the biggest and best men in the business: Weyman, LeBaron, Murphy, Derham, Judkins, Willoughby, Bohman and Schwartz, and others. According to the 1933 catalogue, "Each body is fashioned by leading custom builders from designs developed by Duesenberg artists and engineers . . . wide experience fits us pre-eminently to design and build exactly the type of body you want . . . we invite the thoughts and suggestions of owners who

*(Continued on page twenty-five)*



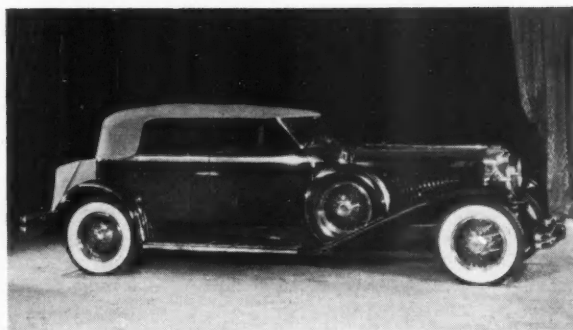
AUTO CLUB OF SO. CALIF.

**SUPERCHARGED 1937, right hand drive custom built convertible coupe Duesenberg built for the Maharajah of Johore**



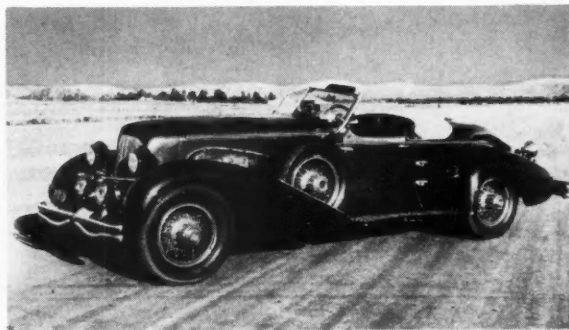
THOMAS J. MEDLEY

**MASSIVE engine of this 1933 Duesenberg uses a 16 psi blower, giving the engine (of 420 cu. in.) a reported 320 hp**



W. EVERETT MILLER

**MURPHY convertible sedan body on a 1931 Duesenberg chassis. Note extreme slant of windshield on this model**

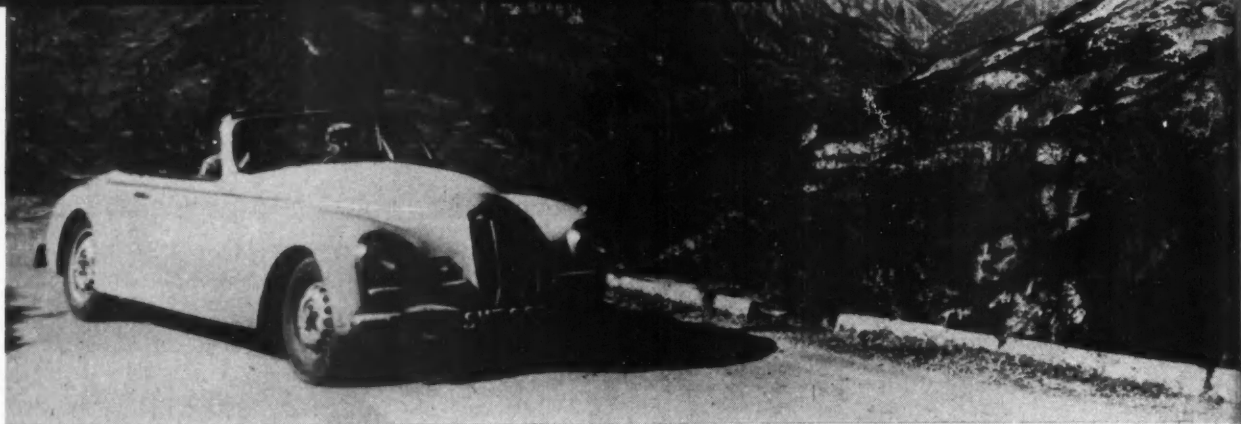


THOMAS J. MEDLEY

**BODY for this Model J Duesenberg speedster was designed and built by Walton, custom coachbuilder of Denver, Colorado**



# Are Foreign Cars the Bunk?



by Robert N. Hoepfner

SINCE the end of the war, much interest in European automobiles has been aroused in this country—with the result that many newspaper and magazine articles have been written on foreign cars. These articles, in the normal course of events, have become well digested by all automotive enthusiasts and are used as a topic of discussion when and wherever enthusiasts meet.

"They're too small . . ." "... too large . . ." "... noisy . . ." "... but it's faster . . ." "... compare displacements . . ." "... how does it ride? . . ." "... the steering's slow . . ." "... yes, but check the valve and porting arrangement . . ." "... how about performance and economy? . . ." "... but look at the rpm's . . ." "... Oh, nuts, foreign cars are phony . . ." "... Oh! are they? Well, those Detroit dream wagons are nothing but bloated, over-stuffed seacows and react the same way" . . . and so it goes, both sides adhering to their own convictions, with no convergence of thought nor either side admitting the superiority of the other. And, outside of a pleasant discussion, this type of debate, wherein the car is dissected and all of its parts analyzed, does little to settle the argument.

An understanding of the reasons behind the design trends of each type is needed to fully appreciate the better features of both. The geographical difference between Europe and America is one of the major factors influencing the respective designs. The American car is designed for eye-appeal to the American woman, with performance and mechanical design factors sometimes sacrificed because of mass production methods. For instance, the ads that appear in publications describing changes to the current model—"bold, dynamic curves, a spacious interior, comfortable seating, a soft, arm-chair ride, etc."

The direct opposite is true in Europe. Their industry is not equipped with the maze of special tooling and equipment required for a tremendous volume, assembly line technique. Each phase of assembly requires many more

operations, limits the volume output and increases the unit cost. The product, however, obtains an overall quality that is generally lacking in American cars. European designers are primarily concerned with performance and economy, having produced remarkable results with engines generally one-half or less the size of American engines. Economy of operation is of utmost importance if the person of average means is to be allowed the pleasure of motoring. Since gasoline is two or three times as much per gallon, it is necessary to obtain the utmost miles per gallon, which accounts for the small high-revving engines associated with foreign cars.

The normal European person has an intense pride in ownership of his automobile, and is probably more cognizant of its inner workings than is the American. The European combines a hobby, competitive sport, entertainment and club interests in the use of his car. Vintage cars are as much admired and respected as the latest models, which is the reason, particularly with the British, why there is a reluctance by some manufacturers to deviate greatly from traditional lines associated with each marque. Advertising in European journals follows the same trend—performance, design innovations, successes acquired in continental trials or races, such as the Mille Miglia, Targa Florio, Le Mans, or Spa—24 Hour Race and the Alpine or Monte Carlo Rally. The items stressed in American advertising are delegated to positions of secondary importance. However, there is a trend in certain models manufactured for export to incorporate body styling and interior appointments in harmony with that found in current American designs.

## Comparisons

In America most driving is done on generally straight, wide roads, where sudden changes in direction are seldom necessary. The European, on the other hand, does most of his driving on fairly narrow and quite twisty roads, mountain passes and city streets, where, if he is to keep



up a reasonable average speed with safety, he must be able to maneuver quickly, and use his brakes hard and often. It is this wide divergence in road conditions and surfaces that is the major factor influencing the peculiarities in design inherent in both European and American cars.

The outstanding technical differences in foreign cars of a size comparable to American products are: steering, brakes, suspension and noise, and which are discussed in their approximate importance.

#### Steering

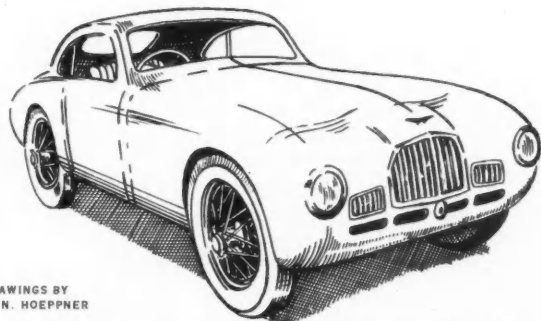
The steering ratio of foreign cars is between 50 per cent and 100 per cent faster than the average American car. The average American considers the steering of European cars too hard and too fast. Also that it is apt to wander all over the highway and is more tiring to drive for any distance. The ability to maneuver quickly at normal speeds in an emergency is in the foreign car's favor over the American steering gear ratios of close to 20 to 1.

#### Brakes

Pedal pressure required to operate the brakes of most European cars is considerably greater than on American cars, since larger drums, larger shoes and much harder linings are used. The brakes are designed in this manner to overcome any chance of brake fade even under extreme conditions, as found in tortuous mountain passes, where frequent and hard use of the brakes is mandatory if a good average speed is to be maintained.

#### Suspension

Foreign car suspensions are somewhat hard as compared to that of the American car. The suspension system is designed to give adequate road-holding under all conditions. It must allow full application of the brakes even on rough road surfaces and without loss of control.



DRAWINGS BY  
R. N. HOEPFNER

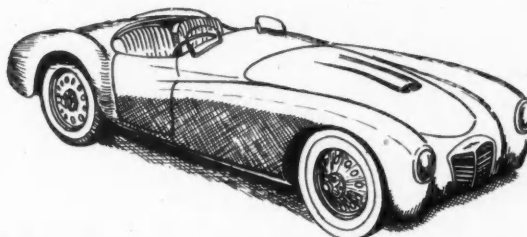
**ASTON-MARTIN** sports coupe, which uses a two litre (122 cu. in.) four-cylinder engine that turns up 90 bhp at 4750 rpm

#### Noise

There is no doubt that the American automobile is by far the quietest. And considering all that is transpiring within it, the American car is a wonderfully quiet mechanism. There has been little effort expended by European engineers to isolate the body, or soundproof it to operational noise. Little consideration has been given to the sound level inside the body, as the European owner has never been educated to expect the noise-free operation that the American manufacturers have given their product.

#### Performance Comparison

America has none of the sporting events such as abound in Europe, in which standard and sport model cars may compete. So a performance comparison under somewhat similar conditions and of sufficient length to adequately test all phases of motoring and the reactions of individual cars cannot be made. A resumé, however, of some of the outstanding European competitions this year may give an indication as to the general acceptability of their products under conditions more severe than normal.



**FRAZER-NASH**, the Mille-Miglia Model, uses a two litre (122 cu. in.) six cylinder engine capable of 120 bhp at 5500 rpm.

#### The Monte Carlo Rally

The 1949 Monte Carlo Rally set an all time record for this type of motoring event. Entries totaled 225, of which approximately 40 were of American manufacture, including all makes but Plymouth and Crosley. Buick and Chevrolet were in the majority. The Monte Carlo Rally was a total distance of 1,957 miles, making an ideal chance for comparison under long distance touring conditions. American cars competed from all starting points but Florence, Italy.

Starting points were from the cities of Glasgow, Oslo, Stockholm, Lisbon, Monte Carlo, Florence, and Prague. From these starting points the route was arranged to give a run of equal distance, irrespective of starting point, converging upon the main circuit at various points. The main route was from Monte Carlo to Geneva, Berne, Strasbourg, Luxembourg, Liege, Amsterdam, Brussels, Rheims, Paris, Lyon and back to Monte Carlo.

The average speed was 31 mph, but allowed no intervals for sleep or meals, so an average of approximately 50 mph had to be maintained. Early arrival at control points resulted in a penalty.

All types of winter weather conditions were encountered—ice, snow, fog and rain—added to the normal ones of time and distance, making driving conditions anything but pleasant.

After completing the regular tour, an elimination event was held to determine the ultimate winner. It consisted of four laps of a very irregular course, the object being to maintain the same time for all laps, as established on the first lap. The winner was the one that set the fastest average.

Long wheelbase American cars were at a disadvantage, showing marked oversteer characteristics and unusual behavior when brakes were applied on sharp turns.

The results in general classifications find few American cars in the first 50. The best were two Fords, which placed 12th and 21st, starting respectively at Monte Carlo and Lisbon. A Mercury from Lisbon placed 33rd, a Studebaker from Stockholm placed 38th and a Chrysler, starting at Monte Carlo, placed 46th.

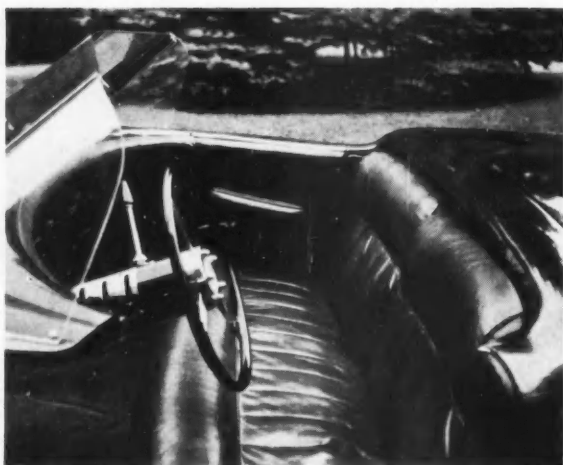
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**W**HEN IT COMES to unusual designs you can bet that Studebaker will be there with the rest of them—witness the Gardner Studebaker Special, which was designed and built by Vincent Gardner. Mr. Gardner is an employee of the Raymond Loewy Associates, located at the Studebaker plant in South Bend, Indiana.

Originally, the car was a 1947 Studebaker Champion three-passenger coupe, but is hardly recognizable as such except for the general lines. Body changes include a new grille, hood, windshield, cowl, clear plastic roof (which is removable and can be stored in the trunk compartment), deck, and tail lights. Sedan front doors were used (by re-making the top section) to replace the original doors. The headlights are rotated 180 degrees, with the parking lights set below. Both front and rear bumpers are from a 1949 Studebaker Commander. The hood and deck lid are both equipped with automatic lifts, using compressed air.

The frame has been reinforced for added strength. The radiator has been lowered and moved forward with the fan being mounted on the crankshaft to correspond with the new radiator location. The steering gear has also been set back and rotated to the proper angle. The clutch and brake pedals are extended to a new position closer to the driver. Over-all length remains the same but the height of the car has been reduced considerably. The seat has been moved back so that the driver sits in the center.

The Champion engine has a Weiand 7.7 to 1 aluminum



high compression head, hard-faced valves, a special coil, a Weiand dual intake manifold and a dual exhaust manifold with two mufflers. The exhaust pipes pass through the center of the tail lights.

The interior is trimmed in natural tan cowhide. A glove compartment is located in each door. All controls (headlights, heater, etc.) are on the steering column. Fresh air is drawn into the car through two holes on either side of the grille and is forced through a heater mounted on the firewall above the toe board.

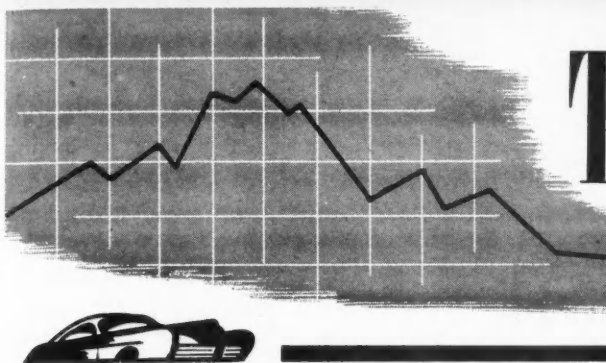
An interesting sidelight on Gardner's car is that in the PRESS ON REGARDLESS, sponsored by the Detroit region of the Sports Car Club of America last year, this car took first place with a total of 903 out of a possible 1000 points. This event was not a speed race, but was a reliability run against predetermined average time over a distance of 450 miles, traversing country lanes and side roads. For this and a fine design, Vincent Gardner has reason to be proud.

*Sixteen.*

## *Styled in* **SOUTH BEND**



*Motor Trend*



# TRENDS

IN DESIGN • CAR BODIES

by William B. Stout, Consulting Engineer

NOTE: This article is a digest of the article, "Car Body Design Future Linked with the Past," which appeared in the July 1949 issue of the SAE JOURNAL.—Editor

**T**RENDS in car body design go back to the birth of the horseless buggy, since they represent a step-by-step evolution toward a goal, rather than mere annual mechanical changes. The original horseless carriages—such as the Olds Locomobile—were horse-height buggies fitted with power and steering, meant to duplicate or slightly better the speed and traveling possibilities of the horse-drawn vehicle.

The buggy for the horse was as high as it was because to see beyond the horse one must be above it. Because of the deficiency in foot-pounds on the part of the horse, these buggies had to be made of the lightest possible weight—the seat barely wide enough to accommodate passengers and the body down below just wide enough to keep the feet from spilling over. The dashboard and the whip-socket were left over from the horse era.

Development of roads went hand in hand with the development of cars. And so we have designed our trends to fit the roads as they came.

## Fenders

The horse did not make enough speed with the buggy so there was not any real necessity for fenders, or "mud guards" as they were called in those days. Some carriages had nice patent leather contraptions; but they were mostly swank, for at horse speeds the mud didn't fling very far anyway. Some of the first horseless carriages even tried to use iron tires like a buggy, or hard rubber tires like perambulators. The cruising speeds were less than 20 mph so that there wasn't much performance requirement. Merely to own a car put one in a social class even without its being chromium-equipped.

The fender and the buggy step, however, have come through quite a period of development. First there was just the step. Then there were the fenders of flat metal. Then the fender was run down to the step to keep the mud from piling onto the step and the step was continued back clear to the rear fender, making a long "running board." This, too, got covered with mud. So the brackets that held it out from the body were covered with metal, bridging the gap between the fender and the body or frame.

## Running Board

For many years this arrangement continued. The running board got more luxurious and became edged with chrome and the fenders were bumped out into the most graceful of curves. But the running board still stayed, occupying its space in the width of the car and taking away from the possibility of width inside the body.

Later, the body was moved out almost to the outside of the running board with a little bumper strip along the edge. But in the present trend the front fender has merged completely into the side of the body, which, in turn, has gone out the full length of what were the running boards, so that this space can now be inside the car instead of outside.

From the front view, the fenders have also gone through quite a metamorphosis. Originally they were a flat sheet, wire-edged, and were held out from the body by exposed brackets; but the mud flew sideways and splashed onto the side of the engine hood. So a fender "skirt" was put on the inside between the fender and the body form, slanting down to form a guard and also giving a support to the fender. As soon as this skirt got down to the frame, the hood—in another sheet of metal—rose up on the other side of the fender "well" and on over to cover the engine compartment.

At first we rounded off the bottom of this fender well and the next year we rounded it off less. Then we moved the lights out into the fenders *a la* Pierce Arrow, and dropped the well from the top of the lights down and then up over the hood.

In the present trend the "well" is practically done away with. The metal coming up the sides of the car curves around the lights and goes directly across to the other light and down again in straight-forward, clean-design fashion. This has given a much more tailored and scientific look of authority to the front end of our motor cars for '49 than in any previous year.

The radiator grille has been both a designers' delight and nightmare. In the early days we merely had a honeycomb radiator exposed in front. Then, in the old Scripps-Booth, we came to a 'V' type, pointed radiator. To make the radiator that shape, however, was too expensive. So a grille was put in front to give a pointed radiator shape.

And then we began to use cars in winter; the grille was arranged with a series of shutters with thermostats to turn the air on and off and to keep radiators and engines at constant temperatures.

Then came the furor on streamlining and "air-flow." One firm built a car with a so-called streamlined body with an outer appearance that was different from anything of its day. The design however, had not gone quite far enough, but it did bring in a very definite trend—that of lifting the hood straight up instead of having side gates down the fender well.

Shortly after, all cars had the hoods lifting up like an

(Continued on page twenty)

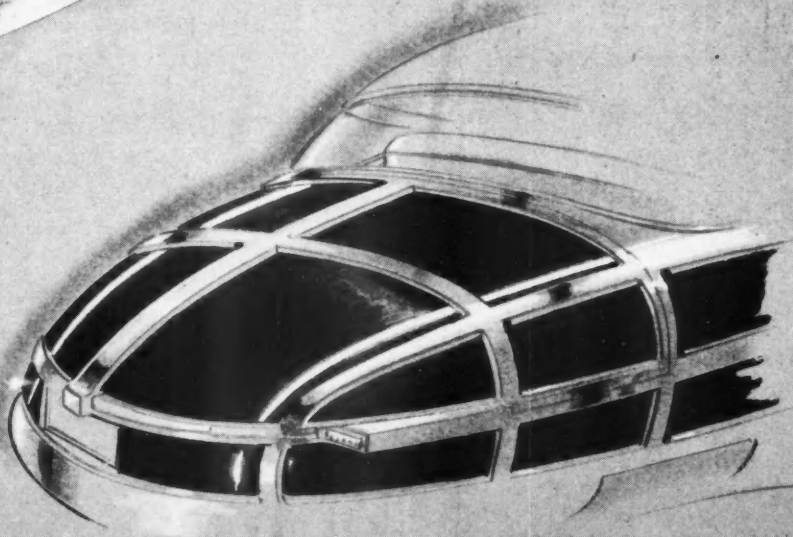
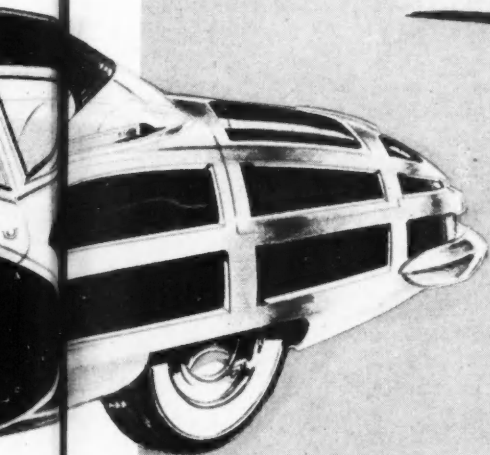
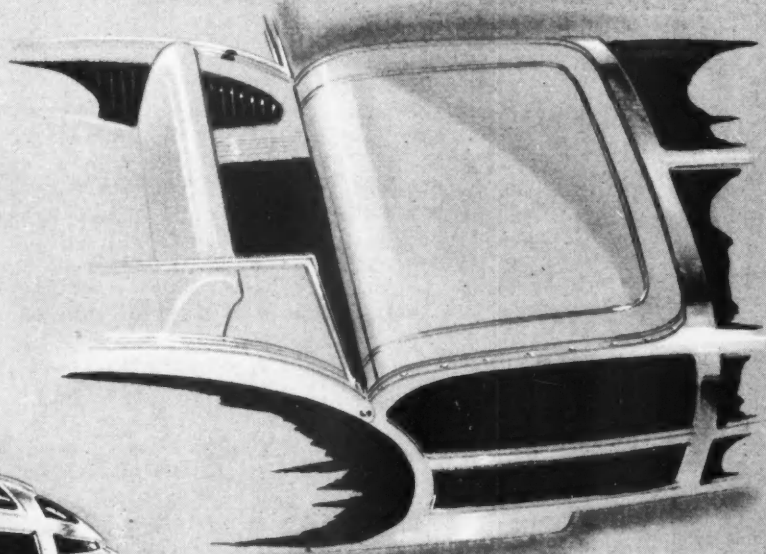
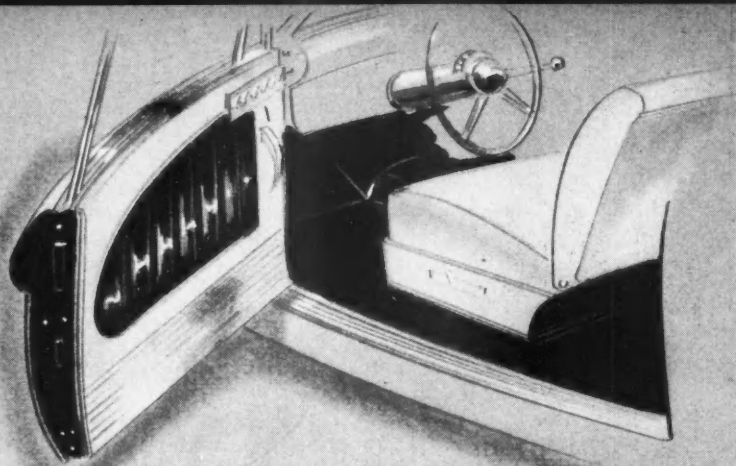
*This rendering by Colonel Alexis de Sakhnoffsky shows a modern version of the metal and wood body. This design, unlike the majority of available models of this type, gives flowing lines to the rear by tying the metal hood and fender lines into the wooden body by graceful curves. At the same time, an airplane fuselage effect is given to the rear by enclosing the fenders and shaping the wooden members into converging shapes. This design allows for an exceptionally large trunk lid which extends over the sides, as shown by the fine line outlining the joint.*

## *Trend of the future*

*Points of particular interest are: the clear portion of the top below the main rear bow (this portion is lowered as one piece before the top folds); the treatment of the inside door panel, which has a map compartment below the lower edge of the pleated panel; the sport-type boot covering the rear seats (the center portion has zippers on each side, giving access to the rear seats without removing the boot); and the smooth appearance of the tail end with lights blended into the side wood members.*







## Trends in Design

(Continued from page seventeen)

alligator's mouth to give accessibility to the powerplant inside. When this came, the old radiator grille did not fit. We dropped the air entrance closer to the road, widened it and narrowed the depth, cluttered it with dragon-like chrome jaws and teeth and the hungry look that cars had for several engineeringly emotional years.

In 1949 the lifting hood design is simpler and cleaner. The grille in front has been tailored down to a point approaching simplicity. But it still takes the heat down low off the hot concrete road in summertime, where the air is 20 to 50 degrees hotter than it is higher up. And since the watercooled engine is limited in its top temperature to 212 degrees F. at ceiling with watercooled power plants, this is a considerable handicap.

### Bumpers

In the new cars our center of glare and swank seems to be not the body nor the grille, but the tremendously powerful and sturdy, glistening bumpers fastened onto the front and rear. And the more surely a car has a giant gaudy bumper on front and rear, the more certain it seems to be hung on by a mere flimsy piece of concealed strap iron to make sure that the bumper won't get hurt if there is a crash.

But in the '49 trend, bumpers are closer to the car and much better attached. They are now a part of the body design instead of looking like an after-thought accessory.

### Headlights

Headlights have gone through this same change. They started out as a separate lantern effect hung on the side of the corner posts of the first cars. Upon entering the fender well period they were supported on a bracket filling the gap between the fender and the hood, in a position where they could most effectively block engine accessibility.

When the alligator hood type began, however, the lights were moved out into the fender. They ceased to be an excrescence and became the eye of the vehicle.

### Rear Fenders

Some firms have already absorbed the rear fender into the body, and all of them eventually will. Trends and changes in the '49 car, however, are so obvious that the new look of the

Hudson, the Nash, the Ford, the Studebaker, the Kaiser-Frazer, and others has been received without question, whereas some of the designs retaining a part of the old look have been criticized for not having moved fast enough.

In the eye of the public, the rear fender is already gone as a separate attachment on the side of the car. As soon as this fact is accepted, all other cars will follow. Separate fenders will have no place in the next trend in motor cars.

### Rear End

There has been a more varied change in the shape and method of the rear end of motor cars than in other parts of design. In the old days we had the square rear end with the wind eddies blowing all the dirt back up against the back window and separate fenders squeaking on either side.

Then came the streamlined era with the roof curving clear down over the back in a smooth contour, giving some of the best looking automobiles that have been produced.

But three things have brought the recent trend: one, the demand for more luggage space; two, the necessity for better rear vision; and three, an uncertainty on the part of the industry as to whether the engine is going to stay in front or back. The trends in body design have been carried on so that when the engine change comes there will be a minimum amount of body change.

The glass below the shoulders of the rear seat passengers does no good except to make a traveling showcase of the body. A certain amount of privacy has been taken away from the occupants and a considerable amount of baggage space has been lost by the deep rear window.

### Windshields

Development of windshields has been a great problem from the beginning. At first we had none and wore goggles, dusters, raincoats, and fur coats, as we had done in the old sleigh-bell days with the horse vehicles.

Then we put on a straight sheet of glass as a windshield in a steel frame and cowered behind it in the rain. Later, a cloth top was added, running from the top of the windshield back with its side braces stolen from buggy tops. But when it rained we were in trouble. The windshield would get

dirty and muddy and we couldn't see through it.

So Bill Rands put a split across the windshield with a hinge so you could tip the top part of the glass back and supposedly shoot the rain over your head as you peeked around the corner.

Then came closed cars. We had straight vertical glass between corner post frames. And hand-operated wipers would sweep back and forth whenever we could take our hands off the wheel to semi-clean the glass so we could see through it. Some inspired designer then slanted the glass backwards, and as the streamlined era came, it slanted even more. But we still had the corner posts!

In 1949 we are seeing the first trend toward curved glass windshields. These will be more expensive. Safety glass was more expensive, but was originally put in by the cheapest car of its day because of the safety feature. That will also be true of curved glass windshields. They will grow into designs which, within a few years, will eliminate the present corner posts of the windshield as we know it.

### Clearance

Cars started at about 12½-inch clearance on a 96-inch wheelbase and could go over a very big bump without hitting anything. As our cars and wheelbases have gotten longer, we have dropped the body clearance at the center between the wheels to an average of something around 9 inches. But in some cars the clearance of mechanical parts below has been as low as five inches from the ground. These cars were designed for boulevards and hard roads.

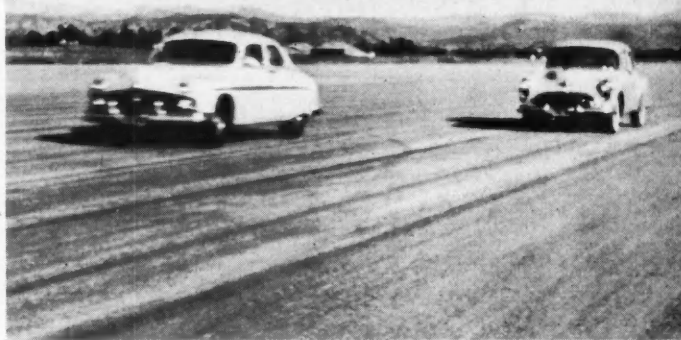
### Car Interiors

Within the last few years practically all motor cars, all of which were known to be good mechanically, have been purchased for their appearance value. If the customer didn't like the looks of the outside, he did not buy, no matter what was inside; and his wife generally made the decision.

This year we have at least caught up with the idea of putting the rear fenders behind the rear seat passenger. Because the fender is out of the way, car interiors are now much roomier in width, although some have suffered slightly from lack of leg room because of too little wheelbase to fully accomplish the result.

But we are beginning to give to the purchaser a greater percentage of the

(Continued on page thirty-one)



PHOTOGRAPHS BY THOMAS J. MEDLEY

# CHALLENGE MATCH

LINCOLN VS. OLDSMOBILE

ABOVE—Lincoln defeats the Oldsmobile 88 in one of the 1/4-mile standing starts

LEFT—Lincoln taking off on one of its individual standing start 1/4-mile sprints

AT AN acceleration meet, sponsored by MOTOR TREND, and conducted by the SCTA, the superiority of the 1949 Oldsmobile 88 suffered somewhat of a blow, for it was found that the '49 Lincoln was a suitable challenger.

The purpose of the meet was to arrive at acceleration figures to be used in a road test report of the 1949 Lincoln, with Hydra-Matic. At the same time, however, it was believed that the addition of a few other 1949 cars would add considerable interest.

A new Lincoln (121 inch wheelbase) four-door sedan was picked up at the Lincoln-Mercury Division of the Ford Motor Company in Maywood early one morning. The car was driven at high cruising speeds to Ramona Airport in San Diego County, by way of La Habra, Perris and Escondido. With three people in the front seat and over all types of roads, the Lincoln was found to be both roomy and easily controlled.

Noticeable features of the car were its good handling characteristics, lack of road shock felt at the steering wheel, its acceleration for passing, and its ability to maintain any speed from

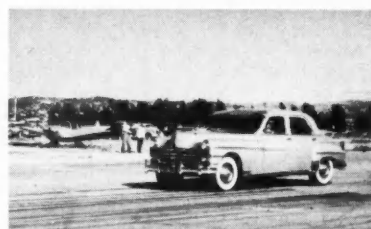
40 to 80 mph. (The Lincoln had been previously electronically timed at 86.20 mph, although the speedometer will indicate a somewhat higher speed.)

After 184 miles of driving over all types of roads, we arrived at Ramona Airport, not the least bit tired from the trip. The 1/4-mile acceleration strip had already been laid out and the electronic timers were in position.

Several of the cars had run through the 1/4-mile standing start and flying start events, so we took the Lincoln through. Its best elapsed time for the flying start (with only 1/10-mile to gain momentum) was :13.21, which gave it second place. Fastest was a '49 Olds 88, with :13.10; third was a '49 Mer-

cury, with :13.93; fourth was a '49 Chrysler New Yorker at :14.55; and fifth was a '49 Studebaker Commander, at :15.29.

The car, sponsor, elapsed time and



CHRYSLER NEW YORKER also sprinted

top speed at end of the 1/4-mile are shown in the following table.

Car	Sponsor	Elapsed Time	Top Speed*
'49 Lincoln	Lincoln-Mercury Division, L.A.	:19.13	74.19 mph
'49 Olds 88	Balboa Olds, San Diego	:18.93	74.19 mph
'49 Mercury	Ernie Walters, Inc., San Diego	:18.85	72.17 mph
'49 Chrysler	Mark Hanna, San Diego	:20.18	No Time
'49 Chevrolet	---	No Time	68.33 mph
'49 Studebaker Russ Nystrom		:21.41	61.98 mph

\*At the end of 1/4-mile.

After the final times were turned, a challenge match was held between the Lincoln and the Olds 88. The first race was won by the Olds 88, but for the second race, the Hydra-Matic lever in

(Continued on page twenty-nine)



HEADING DOWN a pass is the Lincoln

cury, at :13.93; fourth was a '49 Chrysler New Yorker at :14.55; and fifth was a '49 Studebaker Commander, at :15.29.

The next event was a 1/4-mile standing start, with both the elapsed time and the top speed at the end of the 1/4-mile being recorded.

In this event it was found that some of the cars had an initially faster acceleration, allowing them to cover the



OVER ROUGH roads, the Lincoln glides

January 1950

Twenty-one



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More Fun Per Mile



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Foreign Motors, Inc., 1546 Coast Highway  
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Competition Motors, 11515 Ventura Blvd.  
La Jolla, Calif.  
La Jolla Motor Imports, 6798 La Jolla Blvd.  
San Diego, Calif.  
Vollmer Motors, 303 W. "A" St.  
San Bernardino, Calif.  
Ed Dempsey, 1289 Baseline  
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## At Sacramento - - BIG CAR RACES -

(Continued from page eight)

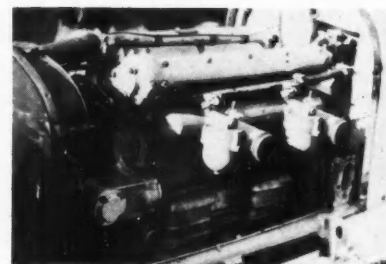
covering the car's steering mechanism must be presented to the AAA Chief Steward. Nothing but Offys might seem to spell monotony for the machinery enthusiast, but the opposite is true—each mill has its own personality and behavior and even its own sounds. Frames, brakes, axles, suspensions, etc., are as varied as the convictions of the individual designers.

The pits came to life that brilliant Sunday morning while the water truck was reducing the red-brown dirt to a good pasty slush. In the warming-up procedures before the trials only one car was really outstanding, a 107 cu. in. blown Offy. Fastest laps in the trials were: Fred Agabashian, :37.57; Troy Ruttman, :37.71; Rex Mays, :38.04; George Connor, :38.09; and Walt Brown, :38.51.

The trials were a revelation to those who had never before seen the 'trucks,' as the big Offys are called, in action. The sight of a single car of this class blasting down the straightaway and churning through the curves was a new thrill for most of the spectators. At about 3 PM the cars were lined up before the stands, and their drivers were introduced over the public address system. After deafening ovations for the favorites, the usual pre-storm silence set in, mills were cranked over and warmed, and the flotilla of thundering racers made its awe-inspiring procession around the track. Then, with the cumulative blood pressure of the crowd approaching critical mass, the flag fell and the combat was on.

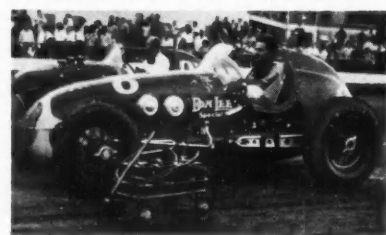
Agabashian was not the only man driving to win, and sharing the field with the nation's finest drivers must have both harassed and inspired him. He lost the advantage of the post position only once, in the 20th lap, when Mays momentarily pulled into the lead. Driving with furious precision, Freddie not only came in first, but led in 99 of the 100 laps. As usual the race was won on the turns, and it was here that the Albany Kid was particularly dazzling. His cut-off on entering curves is almost non-existent, the whole radius being taken in a roaring, accelerating broadside, the rear wheels throwing up a solid wall of dirt. He knows precisely how much his machine can stand, and his control at peak performance is flawless as well as flashy.

(Continued on page thirty-four)



GRIFFITH BORGESON

**OFFY ENGINES**, designed by Harry Miller of Los Angeles about thirty years ago, are made in three basic types: 102 cu. in. for midget use, a 220 cu. in. sprint model, and the 270 cu. in. National Championship—Indianapolis type. All have four cylinders, the two larger engines having twin oh cams and 16 valves. Baby Offenhauser has eight valves and single camshaft



GRIFFITH BORGESON

**LITTLE RED WAGON** is the name given to the battery starter set-up of the Don Lee Offy Special. Mack Hellings at the wheel



PAUL MADIGAN

**BIG CAR STARTERS** cannot always cope with the high compression of the engine. Auxiliary starters, similar to this one on Johnny Mantz's mount, were used in a number of cases for starting the cars



PAUL MADIGAN

**JOHNNY PARSONS** comes within a few feet of the inside rail posts in a controlled slide around the west turn at the Del Mar 100-Mile Championship Race



## -At Del Mar

(Continued from page nine)

on the outside. Behind these two were, in order, Tony Bettenhausen (blown 107 cu. in. Offy), Troy Ruttman, Johnny Parsons, Neil Carter, Paul Russo, Lee Wallard, Milt Fankhausen (all 270 Offies), Hale Cole (238 Offy), Johnny Mantz, Walt Brown, Myron Fohr, George Connor, Cal Niday, Duane Carter, Bayless Levrett and Mack Hellings (all 270 Offies).

With the Oldsmobile 88 pace car leading the way for a number of warm-up laps, the cars finally got into starting position and were given the green flag by Starter Dominic Distarce.

Into the first turn, Davies held his pole position, with Mays diving to the rail behind him. Ruttman jumped into third, while Bettenhausen (blown Offy) began to lose ground.

They were quite spread out at the completion of the first lap, with the first three being the same, Parsons fourth, and Russo fifth. The front positions remained the same for the first ten laps, with Davies being clocked at :41.21, or 87.35 mph.

Then tragedy struck. Rex Mays was riding close to the inside rail coming out of the east turn when his car apparently hit a chuck hole. It turned the car sideways and Mays was unable to straighten it out. The car began knocking fence rails down like toothpicks and flipped into the air, throwing Mays clear. One or more of the following cars struck Mays before they could avoid his body. Not until much later did the 14,000 fans present realize that racing had lost one of its most-beloved drivers—a man who was known and well-liked even by many people unfamiliar with his many fine achievements on the track.

The cars remained under the caution flag for several laps, with Davies first, Parsons second, Ruttman third and Russo fourth. The positions were the same until the 30th lap, when Parsons began to lose ground. Six laps later he was into the pits with a slipping clutch and an oil leak.

Russo then moved into second, followed by Ruttman, Neil Carter and Mantz. Davies, still in the lead, was clocked for one lap at 86.64 mph.

On the 51st lap, bad luck again overtook the second-place car, with Russo's car blowing a rear tire. He was into the pits and out again after losing 1 3/4

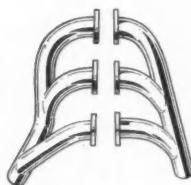
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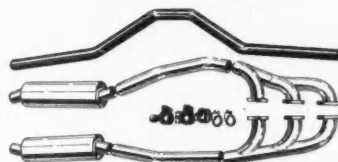
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(Continued on page twenty-nine)

# tendance continentale

## TRANSATLANTIC

**LONDON:** The big show at Earl's Court offered only crumbs to the trend-seeking observer; with a few exceptions this year's models featured refinements of '49 designs, and after-thought details. One of the exceptions was the E.R.A. Javelin super sports chassis, designed by Austrian engineer Eberan van Eberhorst, of Auto Union and Cisitalia fame. The frame, a complex structure of steel tubing, replete with torsion bars, cantilevered supports and anti-roll bars, has a very new look indeed; the power plant is a valve-in-head flat four. . . . The money shortage gave an eerie and wistful air to the show. Most Britons went to look at the '50 cars as they might visit a livestock show—to look at the nice creatures without thought of buying them. Dollar buyers have priority on all cars. . . . There were lots of sport cars at the show. No fewer than 15 manufacturers (notably Jaguar, Javelin, Aston Martin, Lea-Francis, Frazer-Nash, and Allard) are tantalizing the English public with a fine range of autos, from fast tourers to true high-performance road and track jobs that are almost exact duplicates of outstanding competition models.

**PARIS:** The automotive Renaissance is on! The keynote of the Paris show was economy—but what interesting ways of saving money the French have found! . . . The new 2CV Citroen shows signs of becoming a latter-day

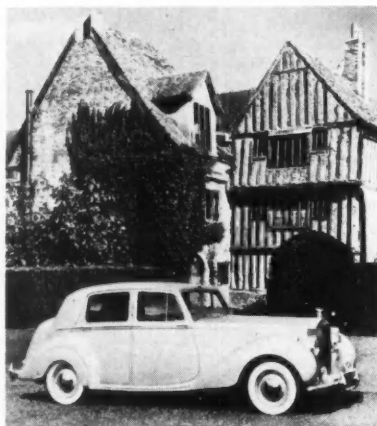


**M. SAOUTCHIK** created this Talbot-Lago  
Twenty-four



by A. Devereux

Model T—good transportation at a rock-bottom price. A typical cost-cutting innovation is replacement of the distributor by installing contact points on the engine fan. The little Citroen mill is a 25.4 cu. in. opposed twin—remember that the smallest American 2-cylinder motorcycle engines displace almost 20 cu. in. more! The rear end of the engine mount rests upon a transverse



**ROLLS-ROYCE** Silver Dawn, still superb

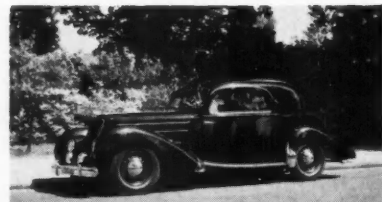
central frame member, which also contains the rack and pinion steering mechanism and acts as a pivot point for the independent front suspension. Like many of its contemporary compatriots, the Citroen's engine is placed ahead of the front axles. . . . The ingenious French are all-out on "minicars" this year. About as minute as you can get is the new Cochinelle roadster, a rear-engine job with a displacement of—this is not a typographical error—7.8 cu. in.! The new Dyna Panhard is what might be called a high-performance minicar. It uses a 38.2 cu. in. flat twin engine and has increased camshaft lift and compression ratio so that it now claims 27 bhp and 68 mph as top speed. . . .

## NEWSLETTER

This year's D.B. emphasizes lightness. With the 31.25 cu. in. engine well ahead of the front axles, it uses a frame weighing about 55 lbs., and pulls 33 bhp, which, with a dry weight of under 600 lbs., gives it a bhp to weight ratio of around 1:18. . . . Delage and Delahaye, each a thoroughbred with a brilliant racing history, are now both being produced by the same firm. They're among the few Continental cars that still combine high performance, high quality, and high cost.

**BERLIN:** The first post-war auto show here was held in September, open air amid rubble and ruin. There were 85 exhibits, none from behind the Iron Curtain. . . . Outstanding in the sport car class is the Meteor Veritas, produced in Germany's French zone. The engine is a 125 cu. in. six using wet cylinder liners in an aluminum block. The aluminum alloy head has a single overhead camshaft which, by clever use of stubby push rods and rocker arms, works inclined valves and permits hemispherical combustion chambers. (Incidentally, the problem of keeping displacement down while stepping up performance has resulted in a whole series of individual methods of using inclined overhead valves without the expense of using two overhead cams or, in some cases, without using overhead cams at all.) The Meteor uses three down-draft carbs, its con rods are light alloy, and suspension is by torsion bars all around. The Veritas factory has big plans for development, and it's rumored that Hermann Lang, Hans Stuck,

(Continued on page thirty-three)



**SALMSEN** coupe uses a 4-cyl. ohc engine

Motor Trend

## Luxury on Wheels

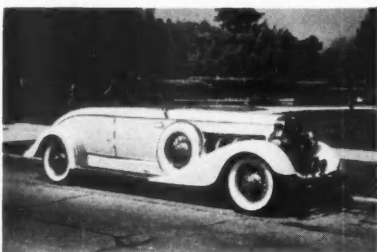
(Continued from page thirteen)

wish to have us incorporate their individual ideas in the automobile we build for them . . ." The buyers of Duesenbergs were probably the most individualistic group of people in the United States and elsewhere, for the bodies they "thought up" and "suggested" were strictly from Mars. I quote from the *New York Times* of August 24th, 1929:

"Sports enthusiasts here at Saratoga, New York, for the annual races have been viewing a special display of Duesenberg cars in the ballroom of one of the principal hotels . . . total value of the eight cars is more than \$100,000 . . . among them is a seven passenger limousine by Judkins . . . finished in mulberry maroon and black, with an interior done in broadcloth . . . tufted and buttoned, the interior of the doors paneled in marquetry work (inlaid woods) . . . a solid silver railing bounds the partition between front and rear seats . . . the second car of the display is a four passenger sports sedan by Weyman . . . the interior is done in Italian Morocco" (goatskin leather tanned with sumac) ". . . fifty-one small pelts were used to complete the interior . . . the leather is finished in pleats about an inch and a half wide, with this same pleating carried into the panelling of the doors . . . a four-passenger, all-weather cabriolet by Derham is painted Gettysburg blue and black, upholstered in a doeskin broadcloth . . . stands only 62 inches high . . . the vanity cases, containing ash trays, cigar lighters, etc., are concealed under the arm rests . . . A Damascene pattern has been chosen for the hardware, etched with a blue background to match the exterior of the car, and mouldings are of carved wood finished to harmonize with both the interior and exterior . . . The ultra in a sports car is embodied in a sport phaeton by Murphy . . . the finish is a light green with upholstery in a silver and green leather . . . wheels, bumpers, lights and strips on the running boards

are chromium . . . the tonneau windshield is pointed and slanted and the tonneau cowl is so designed that half of it raises at a time so that a person entering either side of the body does not have to raise the entire cowl . . ."

Listed in the 1933 Dues catalogue were such magnificent creations as the "Tourster," a dual-windshield phaeton with a huge trunk aft, rubber tile flooring, and no external door handles; a phaeton; a convertible Berline (seven-passenger convertible sedan); a convertible Victoria; the convertible roadster (actually a convertible coupe); the beautiful Beverly, which was a fake convert sedan with individual arm-chairs for the rear seats, "built-in vanity with background mirrors and indirect lighting . . . an oak cabinet containing remote control radio, speedometer, split-second stop clock, and altimeter . . ." (built into the back of the front seat); "the Prince of Wales Sedan" (a car with an eye on the im-



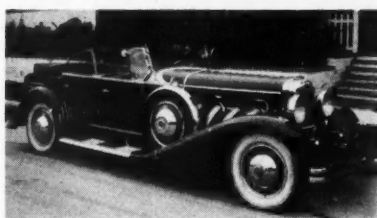
PACIFIC AUTO RENTALS

### 1935 SUPERCHARGED Duesenberg convertible

mediate future as it contained a good-sized bar built into the back of the front seat although Prohibition was not to end until later that year); a Town car; a Town limousine, "The interior is delightfully feminine from the contrasting broadcloth and embroidered satin to the very complete vanity cabinets designed and fitted by Elizabeth Arden . . ."; a convert phaeton (convert sedan); an all-weather Town landau; a formal town car, one of several interiors offered being "sterling silver-inlaid Circassian walnut, bone fitted hardware, cloisonné vanity . . ."; and a supercharged J Streamlined convertible sedan, which I am powerless to describe.

And, of course, every possible variant on the sports body was built on a J chassis at one time or another. Speedsters, phaeton-speedsters, roadsters, club converts, club roadsters, and so on.

Now before we go into any detail on the mechanical specs of the Dues, let me explain a few things about the ac-



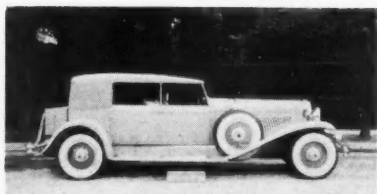
W. EVERETT MILLER

### 1934 SUPERCHARGED Duesenberg phaeton

tual manufacture of the car. In the first place, the Duesenberg plant in Indianapolis was a one-story building; by comparison, it was one-fifth the size of the Stutz plant not very far away, which was five stories high. Consequently most of the Duesenberg operations were design only. According to the chief test-driver for Duesenberg, the Duesenberg engine and equipment were designed and tooled at the Duesenberg plant, then shipped down the street to the Lycoming plant and manufactured there. For verification of this, look on the underside of the flywheel inspection plate. On most Duesenberg engines there will be stamped on this plate Lycoming's name. I understand that there are Lycoming stampings elsewhere on the engine. Also remember that E. L. Cord, president of Auburn, purchased control of Duesenberg in 1926, and you know what engine the Auburn and latter-day Cords used.

There are other facts and figures about Duesenberg to keep in mind; for instance, the J was introduced in December 1928 but no Duesenberg engine was manufactured after 1932. The way this worked is that all Duesenberg parts, castings, etc., were machined and tooled during 1928-32, then stock-piled in bins. All engines and parts used after 1929 were assembled from the bins. The supercharged, 320 hp J was the exact same engine as the 265 hp J; the only changes made in 1932 with the introduction of the supercharged model were the redesigned exhaust manifold (so that the pipes could be brought outside), and the redesigned intake manifold so that the Schebler carb was placed on the right side of the block, where the supercharger was driven off the right accessory shaft. The block assembly, placement of fuel pump, generator, starter, etc. were exactly the same as the 265; therefore, it is safe to say that there is only one J engine design.

NOTE: The technical details of the Series J Duesenberg and many more photographs will appear in the second part of this article in next month's MOTOR TREND.—Editor



W. EVERETT MILLER

### 1930 SERIES J convert sedan by Murphy

January 1950

Twenty-five



## Reversing a Trend

(Continued from page eleven)

tubing, .083-inch wall thickness by four-inch diameter. There are three main cross-members—fore and aft of the engine and the third forward of the rear axle (the latter two are also four-inch chrome-moly tubing).

'A' frames and coil springs are used for front wheel suspension, while transverse torsion bars ( $\frac{3}{4}$ -inch diameter by approximately  $2\frac{1}{2}$  feet) are used in conjunction with the de Dion swing axle at the rear. The rear axle is suspended by brackets supported by the false frame aft of the rear cross-member. The suspension of the car is such that a rear wheel can be jacked up and the corresponding front wheel will also lift off the ground. Houdaille shocks are used at all four wheels. Tires are 5.50x15 in front and 6.40x15 in the rear. The conventional hydraulic brake system is used.

The powerplant is a Ford V-8-60 of 154 cubic inch displacement. The engine has been ported and relieved, uses Eddie Meyer heads of 10:1 compression ratio and a dual manifold. The ignition is by Meyer, while spark plugs are Champion J-6. A stock exhaust manifold is used; however, a cutout permits by-passing of the muffler when the car is used in races. Overhead valves, of the BMW type, are now being made for the engine by Norman Timbs. The radiator has a large frontal area of 371 square inches and a core thickness of three inches.

The wheelbase of the S-E Sports Car is 100 inches, while the tread is 52 inches, front and rear. Without the top, but with a full fuel tank (30 gallons) the car weighs 2380 pounds.

The interior of the car, designed and fitted by Dale Runyan of Hollywood, should satisfy the most critical eye. Maroon genuine leather covers the solid airfoam cushions on the specially constructed seats, while the floor mat is made from Wilton maroon carpeting material. A two-inch leather covered crash pad circles the entire cab area, including the doors and the dash panel. The doors are also padded and are covered with maroon genuine leather.

The dash panel includes only two circular instruments, a push-button radio and twelve control handles. The two instruments are from a late model Nash, with the left dial including a tachometer, oil pressure, water temper-

(Continued on page thirty-two)

## NEW ITEMS

### -- for Fords

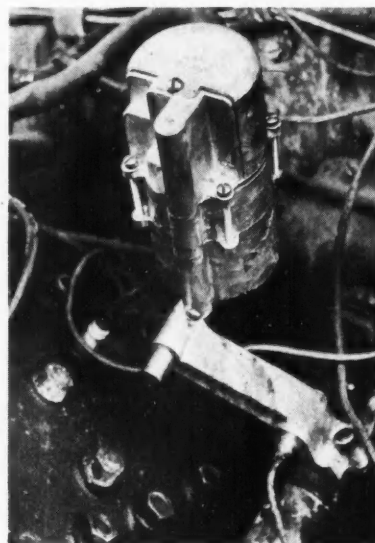
FOR THE HIGHLY discerning Ford owner who wants the essence in "power plants" under his Ford hood, a company (Frick-Tappett Motors, Inc., 5 Harrison Avenue, Baldwin, New York) is now specializing in the manufacture of Ford-Cadillac conversion kits and will do the installation.

The conversion kit, selling for \$375, consists of a bell housing, pilot bearing adaptor, clutch disc, motor supports, dual exhaust piping, instrument transmitter adaptors and heater elbows, radiator hoses, generator bracket, and generator pulley and adaptor.

Details of the work involved, which can be accomplished by any mechanic with the usual automotive tools, include coupling of the Ford transmission to the Cadillac engine with the special bell housing and making minor changes to the Ford radiator to suit hose connections. The standard Ford rear end is used and no change is made to the Ford front end suspension, as the Cadillac engine is approximately only 30 pounds heavier than the Ford engine.

The conversion does not affect the Ford generator, or the controls, such as the gear shift, clutch, throttle or brake pedals. On the Cadillac engine each cylinder bank exhausts through completely separate pipe and muffler systems; therefore, two Ford mufflers are used to make a dual exhaust system.

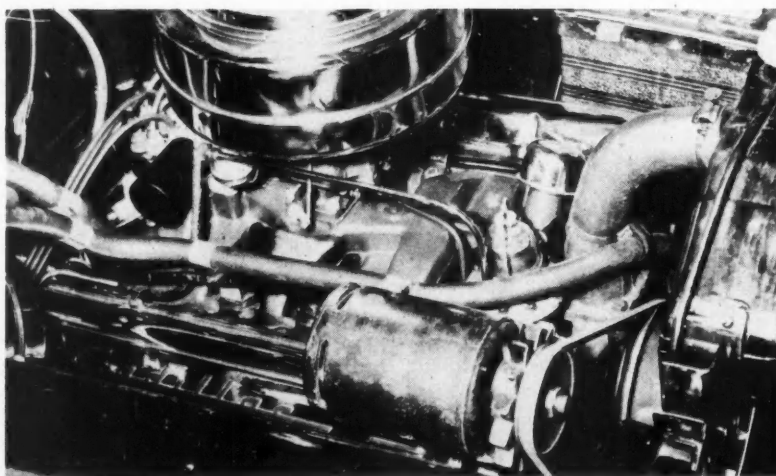
The complete conversion, which includes a Cadillac engine purchased from any Cadillac dealer at \$625 f.o.b. Detroit, is priced at \$1000 to \$1100, depending on the engine exchange.



A semi-automatic gear shift has been developed and has been placed on the market to improve the driving ease of 1940-49 Fords and 1940-48 Mercurys.

The manufacturers of the "Futuristic" gear shift (Future Products Company, 3625 N. Mississippi Avenue, Portland 12, Oregon) state that with this equipment installed, the driver shifts manually to second gear only once per trip. Thereafter, the device, controlled by clutch pressure, shifts gears from second to high, high to second as needed, untouched by hand. Instant return to manual shifting is possible at all times. The company claims that the semi-automatic shift is comparable in utility to other shifting devices on more expensive cars.

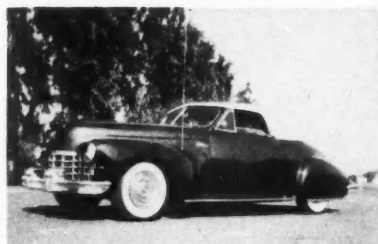
The unit, weighing only  $5\frac{1}{2}$  pounds, is easily installed and requires no maintenance. It is sold with a factory guarantee at \$39.95 freight paid in the U.S.A., foreign freight extra.





# CUSTOM CREATIONS

Photographs sent in for use in this department become the property of MOTOR TREND and will not be returned. Contributors should give their name and address and all pertinent information about the car.



'41 BUICK ROADMASTER customized by James R. Cann of Oakland, California. The top has been chopped 2 1/2 inches, but with the plastic window, is still convertible. The car has been completely dechromed and leaded. It uses a '47 Cad grille, '49 Cad hub caps, a '47 Chrysler front bumper (with Chrysler guards and '47 Buick crossbar) at the rear. The four exhaust pipes are split from duals. Paint is a metallic red eighteen-coat lacquer job. The head has been milled .060-inch



PADDED TOP on this '39 Ford convertible sedan is unusual in that it incorporates a rear window from a '42 Oldsmobile, giving it an unusual amount of vision out the rear. The top is not snapped on but has an angle iron formed to fit the body contour at the rear with the top being removed by loosening two bolts. The engine is a '39 Ford V-8 bored to Mercury size and uses a Merc crankshaft, Weiland heads and manifold. Owner of the car is D. J. Wilkins of California



ODD FIN on this '42 Buick convertible is reported to be something from a Nash. An unusual feature of the car is that a small trap door in the fin is opened in order to reach the trunk handle. The car is upholstered in red leather. This picture was taken in New Hampshire by Lester Bartley. '49 Cadillac rear fins and bumpers have been installed on the car

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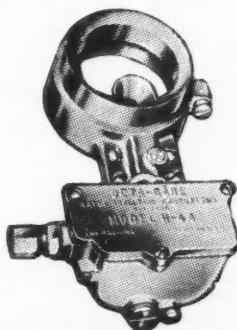
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# DUSTER DATA

by Tracy Gilpin

**E**ARLY opponents of the automobile held that it was strangely prophetic that the first known automobile was also involved in the first recorded auto accident.

Nicholas Cugnot, a captain in the French engineering corps, is credited with creating the first self-propelled road vehicle, the true forerunner of the present day automobiles.

Cugnot's vehicle was a tractor designed to drag field guns. It was a steam-propelled, single-wheel drive that was actuated by two single-acting brass cylinders connected by iron steam pipe. It had a round copper boiler, fire pot and chimney located at its forward end. Ratchet wheels were located on either side of the drive wheel and pistons acting alternately revolved the drive wheel a quarter of a revolution with each thrust.

August 18, 1769, was the day on which Cugnot's steam road monster was given its initial test and with much snorting and puffing it achieved a speed of three miles per hour.

Cugnot's design, considering it was the first known to man, was not too bad. He forgot only two basic things—steering wheel and brakes.

At first, as Cugnot's tractor got under way, the assembled dignitaries gasped with amazement, then cheered. But seconds later Cugnot's temporary fame turned to infamy as a stone wall blocked his route and the wheezing four-wheeler proceeded to destroy itself and the wall. Today the reassembled battered remnants of Cugnot's experiment are on exhibit at the Conservatory of Arts and Trades in Paris.

Although Cugnot was the father of motor-propelled cars, he was not the originator of the first horseless carriage. John Vevers of England holds that distinction with his invention of a foot-propelled horseless wagon or sprocket-pedal type a year earlier.

## First Road Automobile

Stranger than the first accident is responsibility for the long delay between Cugnot's first motor car and

Richard Trevitnick's first road automobile. James Watt perfected the modern type steam engine in 1755. And even before Cugnot's experiment, an assistant mechanic to Watt, William Murdoch, built a working scale model of a steam-propelled road car around 1760. It was a single-cylinder design with a three-inch bore and 1½-inch stroke, with a crankshaft to convert the reciprocating motion into rotary motion. Watt opposed building a full-size vehicle from Murdoch's plans as he was convinced that no vehicle could be invented to successfully negotiate at a worthwhile speed on the poor English roads of that day.

## First Passenger Automobile

To England, however, despite Watt's reluctance to see his steam engine used for other than stationary purposes, goes credit for the first road passenger automobile. Richard Trevitnick at Camborne built a seven-passenger stage, single cylinder with a spur gear and crank axle used to transmit motion of the piston rods to the drive wheels. The original Trevitnick automobile was driven only twice, one mile the first day and six miles on its final trip in 1801. Trevitnick tried again with a workable, but impractical, second model built in 1803. The 10-foot diameter drive wheels made its use on winding English roads impossible.

## First American Auto

In America, Oliver Evans took out a patent in the state of Maryland for a road auto as early as 1784. In 1804 he finally completed what is considered to be the first American automobile, a steam-driven amphibious flatboat wagon (see *MOTOR TREND*, October 1949, p. 23).

For a period of twenty years following Evans' experiments in America no material progress was made in automotive development until England's W. H. James built a twenty seater motor coach in which was installed the first water tube type boiler. James'

first motor coach was too heavy and he scrapped it for a lighter 6,000 pound model which successfully ran at between 12 and 15 mph.

A year later America re-entered the motor vehicle picture with Tom Blanchard of Springfield, Mass., building America's second horseless carriage, which he patented. For several years, Blanchard tried to interest investors in his patent and finally gave up the idea.

The next major advance toward the creation of an acceptable road machine was made in France by Jacques Pecqueur, who built the first differential, using planet gearing, and applied this to a steam driven engine in 1828.

## World's First Bus Route

In 1834 Walter Hancock built two famous motorbusses, the *Era* and the *Infant*. These road coaches made regularly scheduled runs on an irregular basis determined by road conditions, miring in mud and general breakdowns. But amazingly, the *Infant*, a 6,000 pound job with six-foot diameter metal wheels and a top speed of 30 mph, ran 1,700 miles on a London to Greenwich route without a single repair. Not a bad record by any standard.

Hancock's omnibus line was forced out of operation by unfriendly legislation. Well-placed bribes, an occasional compliance with the Red Flag Act of 1836, which required all motor vehicles to be preceded at day by a man on foot waving a red flag and at night by a man with a red lantern, didn't cause too much difficulty. The law that made Hancock's, the first bus company, fold financially was one invoked that charged horse-drawn stage competition \$1 toll per trip and \$10 a trip for the steam bus.

From 1840 until 1878 there was no progress made in the automotive field until the Bollee steam omnibus was built in Paris. This bus averaged 22 mph during actual running time on a Paris to Vienna, Austria run and fifteen years later surprisingly won the Paris to Bordeaux auto race.

## Challenge Match

(Continued from page twenty-one)

the Lincoln was left in DRIVE range, instead of starting in LOW and shifting to DRIVE. Unlike the Buick Special, it was found that the Lincoln accelerated faster in this manner. As a consequence, the Lincoln emerged victorious in the second acceleration race, much to the surprise of everyone concerned.

Although the fact that the Lincoln is comparable in acceleration (SS 1/4-mile) to the Oldsmobile 88 may be discredited by some on the grounds that the Olds may not have been running properly, it should be remembered that both cars met on an equal basis, with neither one enjoying a distinct advantage in tune-up or driver.

## Big Cars—At Del Mar

(Continued from page twenty-three)

laps. Now in second was Ruttman, followed by Mantz and Wallard.

Again, on the 73rd lap, the second-place car had trouble, this time in the form of a leaking oil line. Ruttman drove the car for several laps with smoke billowing out of the cockpit. After attempting to fix the leak, he went back out again, but was signalled off the track on the 80th lap.

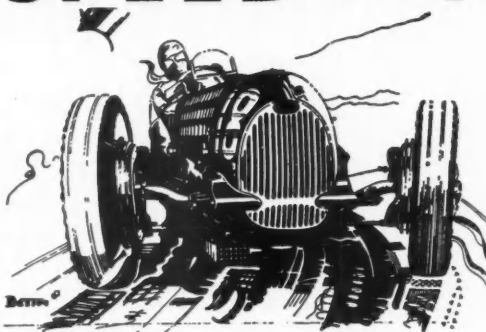
Mantz had moved into second, with Wallard now in third. On the 82nd lap, Mantz (still running second) went into the pits for fuel.

The last driver to move into second spot behind Davies (who had slowed to an average speed of 84.80 mph) was Wallard, who held onto that spot for the remainder of the race. Davies received the checkered flag, doing 86.45 mph on the last lap, finishing the race in one hour 10:17.47. Wallard was second, with Fohr third, Hellings fourth, Russo fifth, Brown sixth, Niday seventh, Mantz eighth, Connor ninth and D. Carter tenth.

For winning his first 100-mile championship race, Davies was presented with the General Petroleum trophy by Babe Stapp, promoter of the race.

Although the first championship race witnessed by Southern California race fans in 15 years was unfortunately marred by the untimely death of the nation's best-liked race driver, the race itself assured the return of big-time racing to the state that supplies the bulk of the Indianapolis cars and drivers.

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## Foreign Cars the Bunk?

(Continued from page fifteen)

### Le Mans

The Le Mans 24-hour race is held on a circuit that is 8.3 miles in length, and on a road that is approximately 20 feet wide, includes 'S' shaped curves, 90-degree corners, a long straight, and other variations. For every car a minimum hourly distance is set which must be maintained. If the 24 hour total is covered under the prescribed time, the same minimum hourly distance must be maintained until the 24 hour time is completed. Otherwise no credit is given for extra distance traveled.

A minimum of 210 miles must be covered between each stop for fuel, oil or water. All spare parts and tools required during the run have to be carried in the car. Tires, however, may be changed in the pits.

Of the 49 cars that started, 19 finished. The winner was an Italian 2-litre Ferrari, which carried off a treble victory by averaging 82.31 mph, won the Grand Prix of Endurance for the greatest distance covered, along with winning the Rudge-Whitworth and the annual Performance Index Cups. The latter were handicap events based on engine size. Second place was won by a 2-litre British Frazer-Nash, averaging 78.53 mph.

### Spa

The Spa 24-hour race is held on the Spa-Francorchamps circuit, a narrow two-lane road, nine miles in length, that winds through the Ardennes forest of Belgium. Entries were open to sports cars and standard touring cars and were classified according to displacement. Rules of the race were along similar lines as those of the Le Mans race.

After running for 24 hours, a V-12, 2-litre Ferrari covered the greatest distance, 1,886.03 miles. Placing second, with 1,863.74 miles, was a 3-litre, 6-cylinder Delage, and an Aston-Martin, with 1,836.79 miles to its credit, placed third. In the touring category of 2 litres and under, a Jowett Javelin, covering 1,573.92 miles at an average of 65.30 mph, took first honors, being followed by an M.G. Midget.

The larger touring car class event for cars of 2 to 4 litres displacement was won by a Delage covering 1,544.98 miles at an average of 64.33 mph. Second place was taken by a Ford V-8, averaging 60.98 mph and covering a distance of 1,464 miles. Note that the

Ford was able to cover only a five mile greater distance than the M.G. However, both classes were dominated by the Javelin, which set the highest average in either class.

### Alpine Trial

Known as the test to destruction, the Alpine Trial lived up to its billing in that over 65 per cent of the starters retired through crashes or breakdowns. An examination of the ratio of starters to finishers in the four largest international rallies held this year will show that the Alpine is supreme. It was the only event which was won or lost on the road section.

This year's event covered 1,830 miles of the most difficult mountain roads in Western Europe. Distributed through the French, Swiss and Italian Alps, including the ascent of 36 mountain passes, it involved approximately 111,000 feet of climbing. Fourteen to fifteen corners per minute, many of them hairpins, are an indication of road conditions on some of the passes.

The Alps form a proving ground which cannot be equalled for severity and, when covered under the exacting conditions of an International Reliability Trial, they test performance in all respects. Hill climbing, cooling, steering, suspension, road-holding and brakes are all given a severe workout.

Although major components of competing cars are marked and cannot be changed during the event, new tires may be fitted to the marked wheels without penalty by anyone who can gain sufficient time from the running schedule. Many drivers took advantage of this after the first day's run of 378 miles and again at about 1400 miles.

Many cars, including a large American convertible, removed every trace of tread from new tires during the first day's run—due as much to the design of the independent front suspension systems (which gain understeer stability on the road at the expense of large tire creep angles on corners) as to the intensive braking and fast cornering required to maintain averages. These included timed sections through mountain passes as well as 113 miles of autostrade that have to be covered at speeds ranging up to 75 mph.

For those who finish the five days' run and pass the technical inspection for damage and general condition, and who have not lost marks on time (a margin of two minutes early or late at time checks is allowed) were awarded Alpine Cups.

(Continued on page thirty-two)



## Trends in Design

(Continued from page twenty)

ground area he purchased when he got the car. Seats used to be two persons wide. Now you seat three comfortably in either seat. The only penalty is the long tunnel that must go through the middle of the floor from the engine in front to the axle in back—a handicap for not having the power in the rear end. And we know of no way to do away with this tunnel as long as the engine is in front.

### Outlook

By gaging the trends from the beginning until the present, one can pretty well chart the path of future changes in cars. First, study must be made to eliminate the corner posts; and second, study to increase the vision at the rear above the heads of the rear seat passengers. Study must be made of weight distribution for car safety when using the brakes at high speed. Attention must be paid to the strength of the roof of all of our cars to prevent their crushing if the car should overturn. Study should be made to enclose all the wheels, and with a crash bumper running entirely around the car.

### Aircooled Engines

There is great significance in the fact that the Army has now adopted aircooled engines for all of its heavy-duty trucks and vehicles. This type of engine is winning its position through performance reliability and certainly not because of any influence by car or other manufacturers. Certainly they are more economical per horsepower, much lighter in weight than our present engines, take less space, and run better under much worse heat and cold conditions. But it also must be admitted they give out more heat and make more noise! If aircooled engines are adopted, they will undoubtedly go to the rear of the car, to prevent that heat and noise from coming back into the vehicle.

Another study might be made so that baggage space could be used as passenger space when baggage is not carried. We make the seven-passenger car in volume, get six snug passengers into the car, and have almost half as much space for baggage in the rear not being occupied by baggage. Perhaps a future trend might be to make the passenger space larger and have some of that space usable for baggage when baggage was carried, which is certainly a small percentage of the time.

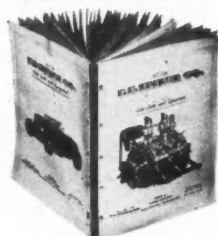
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## Foreign Cars the Bunk?

(Continued from page thirty)

Thirty-one cars were able to finish and of those only one had lost no marks for lateness or other causes. A Citroen was the only car eligible for a Coupe Des Alpes.

### Targa Florio

The Targa Florio, the race of 13,000 corners, is run over the 670 mile tour of the Sicily circuit. It starts at Palermo, to Trapani, south to Castelvetro, Agrigento and through some very rugged mountains to Enna, back to Gela, Siracusa, Catania, over some very fast flat stretches to Messina and then back to the start. Over 100 cars started and less than half the entries finished. Due to the poor weather conditions encountered, skids and crashes eliminated many of the cars. It was impossible to take advantage of any outstanding top speed or acceleration many entries were known to have. There was less than a five mile per hour difference between the sports and touring categories.

The winner was a 2 litre (122 cu. in.) Ferrari at 51.35 mph, in the sports car class, with an Alfa-Romeo second. The touring class winner was a Lancia Aprilia averaging 46.45 mph, while a Bristol placed second.

### Mille Miglia

The Mille Miglia, the thousand mile road race around the central part of Italy, starts at Brescia, travels south to Rome, across the mountains to Pescara, north to Padua, and then back to the start.

Three hundred and two cars started, and were divided into two classes. Sports cars could be modified to any extent, except for the addition of superchargers. The touring category included only standard stock models, which are strictly checked by a technical committee. One hundred and eighty-two cars completed the 990 mile circuit.

Many retirements were due to the extreme high speeds maintained in all classes, with one Ferrari being clocked at 130 mph over a measured kilometer early in the race.

The winner in general classification was a 2-litre (122 cu. in.) Ferrari at an average of 81.68 mph. Second was a similar Ferrari, followed by a 2 1/2-litre (152 cu. in.) Alfa-Romeo coupe, in third position.

In the touring class, a 2 1/2-litre Healey placed first with an average of 68.74 mph. Second was a 2 1/2-litre

Alfa-Romeo, followed by a 2-litre Bristol in third spot.

Outstanding performance was shown by two 1100cc (67.125 cu. in.) Fiat sports cars, which averaged over 71 mph and placed fourth and fifth in general classification.

### Conclusion

It is true that American cars are admirably suited to the majority of American driving conditions—but not to all. The conditions to which they are not so well suited are largely those for which European cars are specifically designed. Over narrow, twisty roads and rough surfaces, foreign cars are far superior. However, any discussion does little to settle the superiority of either design, and that is not the intention of this article.

What then, one may ask, is wrong with foreign cars? One has only to analyze the reasons for their design to appreciate the fine results that have been obtained. European cars suit conditions in Europe; American cars suit the majority of driving conditions found in America. Can there be anything better than making a product to fit the consumer?—unless it could be the ideal car suitable to all conditions everywhere.

## Reversing a Trend

(Continued from page twenty-six)

ature and fuel pressure gauges. The right dial includes the speedometer, ammeter and fuel gauge. The identical control handles are for spark, water injection, electric radiator fan, choke, turning light, headlights, heater, wiper, cold air and cigar lighter. The steering wheel and column shift are from a Studebaker Champion.

For racing purposes, the car is stripped of all unnecessary items, such as the battery, bumpers, and rear seat. The rear seat compartment can be enclosed by a special metal cover. The top is removable, being held on by toggle fasteners. The windshield can also be removed and is replaced by a small racing-type shield.

The performance of the S-E Sports Car should assure its appearance among top finishers in any road race. Acceleration, braking and cornering characteristics are particularly fine, while in normal traffic, fuel consumption is around 22 mpg. It will be interesting to watch this car in competition with some of the better-known foreign sports cars, against which it should make more than just an impression.

## Tendence Contiente

(Continued from page twenty-four)

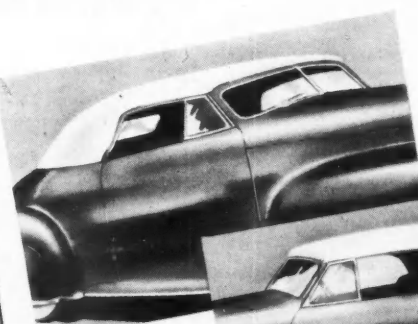
and Manfred von Brauschitch, great veterans of the Auto Union and Mercedes racing teams, will make up a Veritas team in 1950.

**STYLE NOTES:** The European shows seem to indicate that postwar design is crystallizing along rather clearly defined national lines. America, of course, means the 'bulbosity-and-chrome' school. France still stands for chic elegance, and Britain, in its deliberate quest for a characteristic style, seems to be moving toward the 'knife-edged' look made more than respectable—classic, in fact—by Rolls-Royce. The results—on autos less imposingly statuesque than the R-R—are some rather weird mutations. The new little Triumph 1200 Mayflower, for example, seems, to American eyes at least, to carry knife-edged design to a rather extreme degree . . . But who are we to be critical? The '50 Studebaker 'spinner' front end was accepted with admirable tolerance by English critics. According to Autocar Magazine (London), the juke-box grille is out, and next year's trend will be toward the atomic-whirler type. . . . Star body-builder of the European shows this year was the very veteran M. Saoutchik of Paris, who for decades specialized in work for Mercedes and Hispano-Suiza. He's concentrating on the Talbot-Lago these days, with digressions as far afield as one of his offerings this year, an elaborately curved and chromed lilac-and-white cabriolet on a Cadillac chassis. . . . This year's Lago, by the way, guarantees a 130 mph maximum speed.

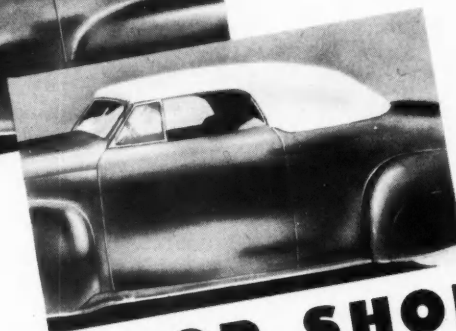
**IN GENERAL:** International racing in Germany has been fouled up by a dispute between the two major auto clubs, and FIA recognition of either has been withheld pending settlement. This is now being accomplished by the formation of a new sanctioning body, the Oberste Nationale Sportbehörde, which will control the sport in the Western zone. The Nurberg Ring circuit is back in use, and Germany's most formidable drivers are again active in the sport. **MORE ABOUT THE ALLARD:** The Allard J2 (described in last month's column) can also accommodate, along with the Ford V-8, such alternative engines as the Mercury, Cadillac or Ardun overhead-valve V-8. The Cotal four-speed electrical gear box is now also offered as optional equipment.

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## Big Cars at Sacramento

(Continued from page twenty-two)

Rex Mays was just as great as his almost legendary reputation implies. He was a big man, rawboned and fine looking, the sort who could make a living playing the frontier marshal in Westerns. His driving was as far from Aggie's as Caracciola's is from Nuvolari's. Rex drove such a calm, poised, efficient race that he was hardly noticeable among the more spectacular contenders. He never seemed to strain himself and glided through the turns as modestly as he flowed down the straightaways. It was nice to see second place taken with such gentility. Certainly, with his death a week later at the Del Mar track, America lost one of its finest sportsmen.

Troy Rutman of Ontario, Calif., drove a hard, consistent, and highly competent race into third position. Very steady in any situation, he justified his status as one of the major post-war discoveries. Myron Fohr, the Milwaukeean who placed fourth at Indianapolis, came off in the same spot at Sacramento.

It was surprising that Johnny Parsons, on a pretty healthy mount, pulled only fifth, considering the immense determination in his performance. He drove, especially in the last half, as though his life depended upon getting a top spot. His technique in the turns, at least as spectacular as Aggie's, was to cut-off at entry, then alternate a series of savage-sounding blasts and decelerations through the curve. The boys with heavy but less jittery feet came off better.

The remaining finishers, in order, were Walt Brown, Lee Wallard, Bayliss Levrett, Mack Hellings, Paul Russo, Milt Fankhauser, and George Connor. Bill Holland went out after the half point with a broken axle. It was a clean race and nobody got hurt.

The two most interesting cars, because they involved experimental features, did not start. Duke Dinsmore's newly acquired No. 69 had, in place of pots, a Hilborn fuel injector system which features constant flow and no timing devices. Bayliss Levrett drove this car in the last Indianapolis trials with normal carburetion at 124 mph. With the injector setup he hit 129, the fastest time for a new driver. The car looked quite good before the Sacramento trials, but complications intervened.

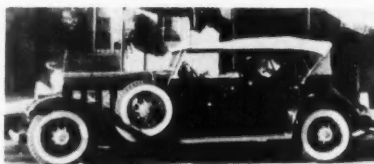
Thirty-four

# LETTERS...

FROM OUR READERS...

Letters published in this department are the opinions of the writers and are not to be construed as those of the editors. Address correspondence to: Letters From Our Readers, MOTOR TREND, 548 South San Vicente Boulevard, Los Angeles 48, California.

## A CADILLAC FOR \$75



Was very interested in George Finneran's article on "Custom Bodies," particularly since I owned one of those fine Cadillacs—a '31 V16. I bought it in '41 for \$75. It took a while to get it back in shape. Before it was reworked it got 4-5 mpg, but with the addition of Stromberg 48's, it got 12-15 mpg. It had an all aluminum body, weighed over 6000 pounds, and cost around \$7200. The body was by Fleetwood. Wheelbase was 145 inches. All tires were original and the paint was also original. All door rails and the windshield frame were solid brass. It was a car to be proud of.

C. F. Dimmitt  
Los Angeles, Calif.

## HOW ABOUT THE DUESENBERG?

I was very much disappointed in your last issue (Dec., '49) because of an advance notice given in the issue of November, '49. At the end of an article on custom bodies written by George Finneran, it was stated that the next issue would contain information about the Duesenberg (bottom of page 30). Not one word was even mentioned pertaining to the Duesenberg, but plenty about the Lincoln. The world's finest motor car should rate as much space as a Lincoln.

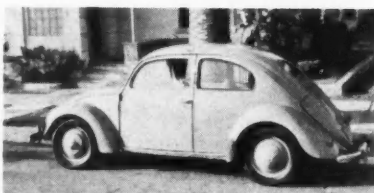
Ed Mayor  
Portland, Oregon

—See page 12 of this issue.—Editor.

## 60,000 MILES IN A VOLKSWAGEN

Since I like my Volkswagen so much... I took a picture last week with my wife standing behind the car... This car was purchased in 1947; however, upon arriving in Long Beach a year ago, I slightly modified it by removing the running boards and repainting it. This car has travelled over 60,000 miles, having toured the Southern Alps to Italy across the highest highway in Austria, Gross-Glockner-Strasse, crossed Germany, in addition to the United States from coast to coast, including Southern and Northern California.

Hans B. Kirchner  
Long Beach, California



## "BLISTER BOXES VS. CLASSIC CARS"

Congratulations on the wonderful job you are doing with MOTOR TREND and three great big cheers for George Finneran's two articles on custom bodies. His wild imagination and wit make for just about the finest known technical automobile reporting I've ever read. Hope you keep him slaving on more such reports. The field is so interesting I would just as soon see him start all over again from the beginning.

Now I must race to the defense of Messrs. Kelsey and Selan, who appear grossly outnumbered in their attack of "blister boxes." The fade-away fenders, shaved noses, and chopped or padded tops are uniformly designed to uglify any car... I'm not suggesting that you should eliminate the restyling features... but please don't abandon the magazine to "blister boxes" entirely.

Tom McEnroe  
Long Beach, Calif.

... You have featured in your first two issues "customized" stock cars. These, you explain to Mr. Selan, are of interest because of features later adopted by production cars. I see a dozen such cars on my way to work in the morning—they all look very much alike... no real sports car fan has any interest in how well Mr. Grace of Los Angeles succeeds in "restyling" a Buick to look like a Ford which has been restyled in a similar manner to look like a Chevrolet... although I don't like its appearance, Mr. Timb's car is new, has innovation, and above all displays a trend...

Robert H. Jakob  
San Francisco, Calif.

Contrary to the opinions ventured by some of your readers, I would like to see more custom cars appear on the pages of your publication. I think most custom creations have been erroneously dubbed "blister boxes." I do concede, however, that there are many exceptions to this statement. I can appreciate European craftsmanship as such, but as far as their "inimitable lines," I am partial to a '48 Lincoln Continental body.

Hugh H. Snowden  
University Park, Md.

... He (Mr. R. Selan) must remember that most of these "blister boxes" are the hard work of fellows like you and me. They are not something that is mass produced. They show our own personal arrangements of the way a mass-produced car should or could look... he must remember also that most of these cars cost one-tenth of what was paid for one during the 1925-1932 period. I say more power to the fellows who want to be different. I have a '39 Ford which has been restyled and it's a good feeling to have people stop and admire it even though it's ten years old.

George W. Jackson  
Washington, D.C.

Motor Trend



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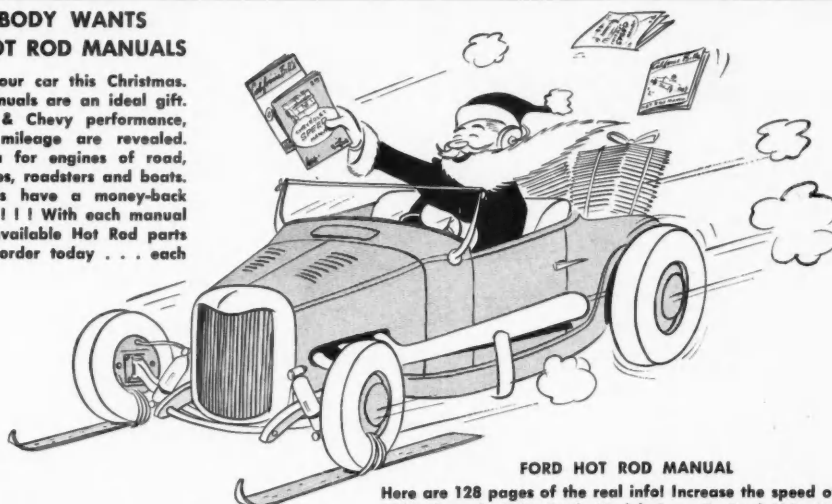
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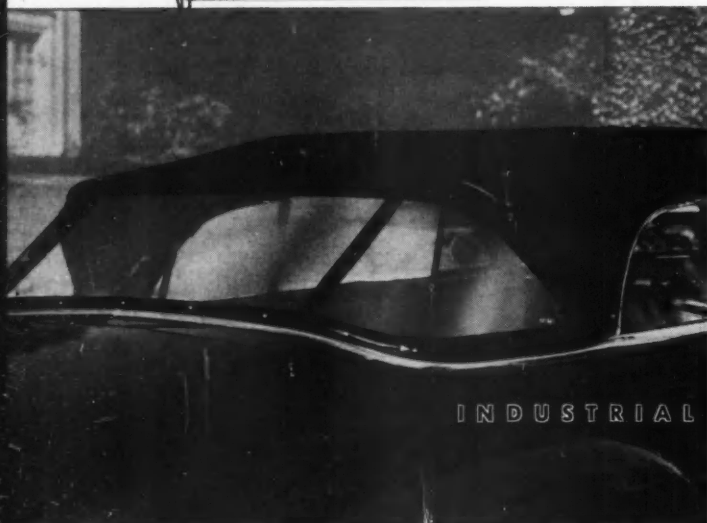
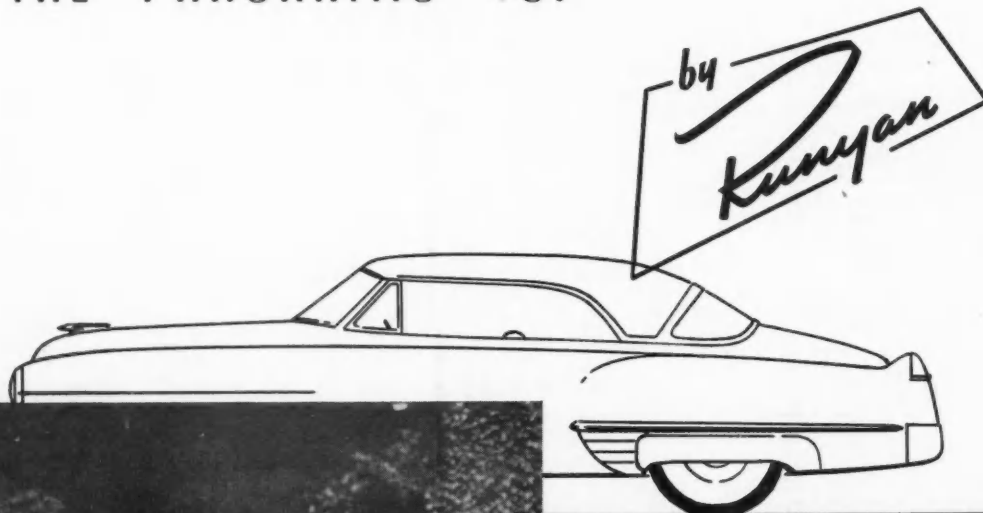
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